

No. 4.

THE TRANSACTIONS

AND

JOURNAL OF PROCEEDINGS

OF THE

DUMFRIESSHIRE AND GALLOWAY

Natural History & Antiquarian Society.

SESSIONS 1883-84, 1884-85, 1885-86.



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1887.

THE winds

And rolling waves, the sun's unwearied course,
The elements and seasons : all declare
For what th' eternal Maker has ordain'd
The pow'rs of man : we feel within ourselves
His energy divine : He tells the heart
He meant, He made us to behold and love
What He beholds and loves, the general orb
Of life and being ; to be great like Him,
Beneficent and active. Thus the men
Whom nature's works can charm with God himself
Hold converse ; grow familiar, day by day,
With His conceptions ; act upon His plan ;
And form to His the relish of their souls."—*Akenside*.

“If any man maintaineth that learning takes up too much time that might otherwise be better employed, I answer that no man can be so straitened and oppressed with business and an active course of life but may have many vacant turns of leisure. . . . Wherefore, let no man fear lest learning should expulse business ; nay, rather it will keep and defend the mind against idleness and pleasure, which otherwise, at unawares, may enter, to the prejudice both of business and learning.”—*Bacon*.

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PROCEEDINGS AND TRANSACTIONS
OF THE
DUMFRIESSHIRE AND GALLOWAY
NATURAL HISTORY AND ANTIQUARIAN
SOCIETY.

SESSION 1883-84.

5th October, 1883.

ANNUAL MEETING.

Dr J. GILCHRIST, President, in the Chair.

Twenty-five members present.

Donations.—The Secretary laid on the table Nos. 6, 7, and 8 of the Transactions of the New York Academy of Sciences and Part 7 of the Transactions of the Essex Field Club. Mr M'Andrew, V.P., presented 500 specimens of Mosses, Hepatics, and Lichens; Mr M'Dowall intimated that he had received from Mr Dinwiddie, of New York, two small objects of Egyptian antiquity for the Society.

Exhibits.—Mr Wilson, V.P., exhibited 30 specimens of the rarer plants found by him during the past season. One of these was the American pond-weed, *Elodia canadensis*, which is now very abundant in the Nith, and spreading rapidly. He also exhibited a piece of porphyry bored by *Pholas dactylus* and several shells of this mollusk, and briefly described the different theories respecting the way in which the holes were made.

SECRETARY'S REPORT.

The Secretary (Mr J. Rutherford) submitted the following Report for the past Session:—The number of members on the roll at last annual meeting was 137. During the year 72 names were added, but owing to death and other causes

12 names have been removed, leaving at present 197 names on the roll. During the session we have had the usual seven monthly winter meetings and five summer field meetings; and it is with pleasure that I bring before you the fact that the attendance at all the monthly meetings has been much larger than in any previous year, giving evidence of the increased interest taken in natural history and antiquarian subjects. The average attendance at our winter meetings was 34, and at our summer field meetings 26, as against 22 and 21 the previous year. At the ordinary winter monthly meetings 14 papers were read, many of which were of a very high class character.

The January winter meeting requires special notice, for it was held as a *conversazione* in the Greyfriars' smaller hall, and you will all remember it with delight as being one of the sunnier spots in connection with our year's work. A large collection of objects of natural history and antiquarian interest was sent in for exhibition by members and friends. The meeting was opened by Provost Lennox, and several addresses were delivered during the evening. The public were admitted by ticket, and the number of those that attended was so large that the hall was crowded; and many unable to obtain admission went away. On the 30th March a special meeting of the Society was held for the purpose of considering the proposed alterations and repairs on the "Old Bridge," as they would have materially modernised and altered the ancient character of that structure. A petition approved of by the meeting was laid before the Town Council, with the satisfactory result that the Council changed their first plan, and, in the repairs executed, maintained the old lines of the bridge.

During the winter months we also had an intermediate course of lectures. The subjects chosen related to natural science and antiquities, and were treated in a popular way, and drew large audiences. I am of opinion that those lectures and the *conversazione* were the means of considerably increasing the popularity of the Society during the session.

The Summer Field Meetings were all well attended; and, considering the amount of ground to be gone over at each meeting, a fair amount of work was done. I think our methods on these occasions might be improved. It is well known, that if curiosity or enquiry is excited, knowledge is the result. At all our Field Meetings (with one or two exceptions) our botanists gather plants, and stow them carefully away in

their vasculums, shutting the lids with the gentlest tenderness, and on they go again with their eyes constantly fixed on the ground, and, unless interrogated by some one as to their latest find, it is, like the scapegoat of old, "never heard of any more." It is the same with our geologists and entomologists, and the result is that nobody gets any information but themselves.

The next matter I have to notice is the recent Conference and Exhibition of the Cryptogamic Society of Scotland, which was held in Dumfries. Though not strictly the work of this Society, yet it was so closely connected with it that it deserves to be noticed here. The committee and office-bearers of this Society were, for the time being, appointed the local committee of the Cryptogamic Society, and had to undertake all the correspondence and work required for the Conference and Exhibition. These took place in Greyfriars' Halls, and were pronounced by the members of the Cryptogamic Society to be most successful in every respect. There was a small deficiency of 33s after all expenses were paid, and this was defrayed by the guarantee fund.

During the last session a large number of donations have been received, and deposited, according to agreement, in the Observatory Museum.

In closing this brief report of our year's work, allow me sincerely to express the hope that we may continue to prosper during this session as we have done during the last; and that as we gradually become more and more acquainted with the beauties and perfections of Nature, our minds may be lifted up in adoration to Him that made the world, with the fulness thereof.

The Treasurer, Mr W. Adamson, submitted his financial statement for the session, showing the Income and Expenditure to be as follows:—

INCOME.		EXPENDITURE.	
By Arrears - -	£1 0 0	To Balance due from last	
„ 140 Subscriptions at 2/6	17 10 0	Session - -	£8 1 9
„ 43 „ 5/	10 15 0	„ Secretary's Expenses	6 5 3
„ Interleaved Copies of		„ Printing of Circulars, &c.	6 17 6
Flora and Transac-		„ Rent of Halls - -	2 0 0
tions sold - -	1 19 0	„ Sundries - - -	0 8 0
		„ Treasurer's Expenses	0 7 7½
		„ Balance on hand -	7 3 10½
	<hr/>		<hr/>
	£31 4 0		£31 4 0

“ Audited and found correct.—(Signed) J. W. Kerr.”

The meeting then proceeded to the election of Office-Bearers and Committee of Management, with the following results:—

President, Dr J. Gilchrist ; Vice-Presidents, Sheriff Hope, Messrs J. G. Starke, J. Wilson, and J. M'Andrew ; Secretary, Mr J. Rutherford ; Assistant Secretary, Mr S. A. Chrystie ; Treasurer, Mr J. Lennox, instead of Mr Adamson resigned. On the motion of Mr Wilson, it was agreed to increase the number of the Committee from eight to ten (five to form a quorum), and the following were unanimously elected : — Messrs W. Lennon, J. Neilson, T. Watson, J. M'Meekan, W. Adamson, J. Maxwell, J. Barbour, J. Davidson, R. Chrystie, and S. M. Brown ; Auditor, Mr G. H. Robb.

On the motion of Mr R. Chrystie, it was agreed that the Transactions for the past three years be printed, and the Committee were instructed to appoint a sub-committee to prepare the same for the press.

The subjects of a *Conversazione*, Intermediate Lectures, and a proposal to hold short Field Meetings during the summer were next discussed, but these were remitted to the Committee to be dealt with as they thought best, and who were to report at the next meeting their decisions.

The Secretary read a letter received from the Rev. W. Graham of Trinity Church, Edinburgh, suggesting that the Society might respectfully memorialize Mr Robert Jardine, M.P., and Capt. J. Hope-Johnstone to explore the ruins and fosse of Bruce's Castle at Lochmaben, in the interests of antiquarian and historical investigation. On the motion of Mr Watson, this was also remitted to the Committee for consideration.

2nd November, 1883.

MR J. GIBSON STARKE, V.-P., in the Chair. Thirty members present.

New Members.—Mr J. S. Montgomery and Mrs Montgomery, Rosemount Cottage ; Messrs J. Hannay, Church Crescent ; J. W. Dods, St. Mary's Place ; and J. Clark, The Schoolhouse, Lochmaben.

Donations.—The Secretary laid on the table a specimen of diseased parr, preserved in spirit, showing patches of the fungus (*saprolegnia ferox*), the gift of Mr Bruce of Slogarie ; a Catalogue of the Armour, &c., in the Royal Museum of Antiquities, Brussels, presented by Mr Starke ; a silver coin of the reign of

Charles I., found at Greystone, by Mr W. Rae, Queen's Place ; a Land-rail (*crex pratensis*) by Mr J. T. Scott.

Exhibits.—The mummified remains of a cat and rat—the cat having its teeth firmly fixed in the neck of the rat—found in that posture after the fire at the London Stock Exchange, were exhibited by Mr Graham. Miss Burnet exhibited a number of Indian curiosities, including a brass tray, ear-rings, a necklet and necklace made of coral, two serpents' skins, the nest of the tailor bird, and a humming bird.

COMMUNICATIONS.

I. *The Sociological Value of Entomology.* By D. SHARP, M.B.

Dr Sharpe read an interesting paper on the above subject, in which he stated that the estimated number of insects on the globe was nearly 2,000,000 different species, and that it would take the work of a life-time to investigate the life history, the distribution on the face of the earth, and the relation to others of a single species. He pointed out the great importance of entomology in being able to discriminate friends from foes, as well as the benefits to be derived by it from an educational and recreative point of view. Referring to the wonderful variety in the size and structure of insects, he exhibited a beetle (*Ptilium excavatum*), forty of which would be required to make a heap the size of an ordinary toilet pin's head ; and yet it consisted of an external skeleton, composed of 150 or 200 articulated pieces corresponding to bones, and within the skeleton there was a vast number of muscles, a complicated nervous system, and complex circulatory, respiratory, &c., apparatus, analogous to the internal organs in the larger animals.

II. *The Museums of Brussels.* By MR J. GIBSON STARKE, V.-P.

In this paper, Mr Starke described the principal museums of Brussels, and enumerated the natural history and antiquarian specimens interesting to the members who might visit that city.

7th December, 1883.

Dr GILCHRIST, President, in the Chair. Thirty-seven members present.

New Members.—Messrs A. Innes, Inland Revenue ; W. Baird,

Loreburn Street School; T. Laing, Noblehill; J. Thomson, Midtown, Carlaverock; R. Paterson, High Street; and W. Smith, Terregles Street.

Donations.—The Transactions of the Linnean Society, from W. D. Robinson Douglas, Esq., in parts—on Zoology from Feb., 1874, to Oct., 1883; and on Botany, from Feb., 1877, to Sept., 1883. The Transactions of the Glasgow Natural History Society for 1881-82. Two old volumes from Mr Riddick—one on “The Heart’s Ease,” by Dr S. Patrick, printed 1682; the other on “Dying Thoughts,” by Rev. W. Crawford, 1744. The Chairman presented about 100 specimens of minerals and rocks of the district.

COMMUNICATIONS.

I. *Ornithological Notes.* By Mr W. HASTINGS.

Amongst a great variety of birds that have been forwarded to me from various parts of the country for preservation during this year, I have very little to note of any species that can be called *rare*, although some of them are by no means common. In the month of September I received a fine specimen of the female black-tailed godwit (*Limosa Egocephala L.*), the second one that I have had killed in the district. It is a small light-bodied bird, not larger than the golden plover (*Charadrius pluvialis*), with very long, slender legs, adapting it for wading in the shallow pools upon the banks of rivers left there by the ebbing tide. About the same time I received a curious specimen of the ring ouzel (*Turdus torquatus*) or mountain blackbird, with a pure white head and neck, which gave it a very unusual appearance. I have had the common blackbird marked in much the same way, but never the mountain one. It frequents the rocky glens throughout the country, and I have seen the peregrine falcon (*Falco peregrinus Gm.*) and it having their nests both upon the same rock. In the same month I received a fine specimen of the male shoveller (*Spatula clypeata L.*) I have had the duck many times, but never the drake. It was shot in Wigtownshire. The great black-backed gull (*Larus marinus*) seems to be more plentiful this winter than usual. I have had a good many specimens lately; it is a large and fine species. In the month of October I received a box containing among other things four specimens of the small crested cormorant or shag (*Phalacrocorax cristatus F.*), a species that is not met with in this district, but is known to

breed upon Ailsa Craig. It is a most successful fisher. The short-eared owl (*asio accipitrinus P.*) seems to be very plentiful this winter. I had more of them than I ever recollect of having in one season before. I also received lately a very curious specimen of the grey hen assuming the plumage of the cock; she is considerably larger than the common grey hen, and has a curious mottled appearance—black and grey all over. About the beginning of last month I received a good specimen of the red-breasted merganser (*mergus serrator L.*), and in winter plumage; it subsists upon fish, and has the bill toothed like a saw for the purpose of holding its slippery prey. It is not uncommon about the outer Hebrides, and also in the Orkney Islands. These are a few specimens that I have thought worth taking notice of—some for their rarity in the district, and others for their appearance in greater numbers than usual. I may also mention that squirrels are now very plentiful throughout the country.

II. *Notes on Lincluden Abbey*, No. 1. By MR JAMES BARBOUR.

For this important communication, see proceedings of 7th March, 1884, as it is combined with No. 2, which was then read, for the purpose of giving a more concise and complete description of this noble edifice, and of the ruins recently unearthed by the excavations conducted by Captain Maxwell.

4th January, 1884.

Dr GILCHRIST, President, in the Chair. Twenty-seven members present.

New Members.—Mr J. M. Aitken, Ravenshill; Mrs Baird, Mrs M'Kenzie, and Mrs M'Gowan were elected ordinary members; and Messrs G. F. Black and R. Henderson corresponding members.

Exhibits.—Mr W. Adamson exhibited specimens of Coralline limestone and trap rocks from Winnipeg and Niagara. Mr Henderson exhibited numerous specimens of grasses and flowering plants from Manitoba, and the skins of several wild animals, including the badger, goffer, squirrel, and skunk. He stated that the specimens of wheat and oats on the table were each grown from a single grain, and that it was not unusual for the

wheat to have forty heads, and the oats as many as thirty, on the one plant

COMMUNICATIONS.

I. *First Blossoming of Wild Flowers in Tynron during the Summer Months of 1882 and 1883.* By Mr JAMES SHAW.

This paper was read by Mr Wilson. The writer stated that the area included in his observations was at an elevation of from 300 to 1400 feet above sea level. The soil of the district is thin, well adapted for sheep pasture, and the geological formation is Silurian and conglomerate. There are no fields of wheat, barley, or rye; but oats, turnips, ryegrass, and potatoes are grown. Mr Shaw's list of plants recorded the dates when first noticed during the two seasons, from which it appeared that the year 1883 was much later than 1882. The month of February, 1883, was exceedingly mild, and induced the Coltsfoot (*Tussilago farfara*) to blossom. March, however, was cold and backward, with cutting frosty winds, so that in the beginning of April plants of *Tussilago* might be seen surrounded by the withered petals of the first crop. In his concluding remarks, Mr Shaw says "that the marsh marigold, the stitch-wort, and the common broom are thus found a week behind in 1883; the spring blue-bell (*scilla nutans*) and the marsh violet (*V. Palustris*) are noticed a fortnight later in 1883. The early orchis plants (*O. mascula*) were in blossom in April, 1882, but not noticed until the third week of May, 1883. *Gerum rivale* is equally behind. Some of the flowers noticed in blossom in the first week of June, 1882, are not noticed until the third week of June, 1883. Generally speaking, the vanguard of any given species came to the front a fortnight later in 1883."

II. *Notes on the National Collection of Antiquities in the Museum at Edinburgh.* By Mr G. F. BLACK.

In this communication, which was read by the Secretary, the writer briefly described the foreign section of the museum, and promised to contribute a paper on the Scottish Antiquities at a future meeting.

III. *Notes on the Natural History of Southport.* By Dr J. GILCHRIST, President.

In the course of this paper, Dr Gilchrist mentioned that

Southport is noted for the rapidity of its growth, and also for the peculiarity of its site. It is built in the centre of a sandy district, about three miles in diameter, which is terminated on the western side by the sea. The rocks of the district are Triassic, being extensions of the Cumberland and Westmorland hills. The flora is rich and varied, and, with regard to many species, unique, owing to the influence of the sandy soil and the sea. As an illustration to the paper, he exhibited numerous specimens of the plants and a few pieces of the rocks collected there during a recent visit.

18th January, 1884.

Dr GILCHRIST, President, in the Chair. Forty members present.

A Special Meeting of the Society was held this evening in the Greyfriars' smaller hall for the purpose of giving the members an opportunity of exhibiting and describing objects of interest which they possessed. Dr Gilchrist exhibited several specimens of minerals from the Leadhills and other localities. Mr Wilson exhibited about 100 specimens of mosses, and recommended the botanical members to take up that branch of study, as the specimens were to be found at all seasons. Mr Lennon exhibited two cases of Lepidoptera. Mrs Murray sent a piece of the counterpane which covered the bed on which Queen Mary slept at Terregles House. Mr James Lennox shewed two fine specimens of bronze spear heads. The Secretary (Mr Rutherford) exhibited a bronze ball, which had been found in Torthorwald Parish, 3 ft. 3 in. beneath the surface. The ball was submitted to Mr Dudgeon of Cargen, who sent it to the National Museum, Edinburgh, where it was analysed, and found to be composed as follows:—Copper, 62·9; tin, 13·7; zinc, 12·2; lead, 8·8; iron, 0·6; silicious matter, 1·4. A note accompanied these results, stating "that none of the authorities in these matters can make out what it has been intended for; no similar bit of bronze has been seen before." Other objects of interest were exhibited by Mrs M'Kenzie, Miss Burnet, and Mr S. A. Chrystie.

1st February, 1884.

Dr GILCHRIST, President, in the Chair. Thirty members present.

The Secretary intimated that the Society was about to lose one of its energetic members—Mr J. M'Meekan—who would in a few days leave this country for Tasmania, and moved that Mr M'Meekan's name be transferred from the Roll of Ordinary to that of the Corresponding Members. The Chairman seconded the motion, and remarked that Mr M'Meekan was one of the few young men who had taken an active interest in the Society for several years. He had done what all young men ought to do—he had never missed an opportunity of gaining knowledge and information, and he would find now that there was nothing to him so important. The motion was unanimously agreed to.

Donations and Exhibits.—The Secretary laid on the table Vol. II., Part III., of the Proceedings of the Perthshire Society of Natural Science, and Vol. II., Part III., of the Transactions of the Glasgow Archaeological Society, as donations from these Societies. Dr Gilchrist exhibited a small chicken that had been born blind, and remarked that this malformation was of rare occurrence in ornithology. He also exhibited a piece of slate from Keswick, containing vestiges of the original stratification.

COMMUNICATIONS.

I. *The Founder of Lincluden Abbey and his Relatives.*

By Mr W. M'DOWALL. (Abstract).

In this paper Mr M'Dowall stated that Galloway at the Lincluden era was not only Celtic in its population, institutions, and language; it was besides, all but independent of the Scottish Crown. It was in the neighbourhood of Northallerton, amid conditions of battle and slaughter, that we get our first reliable glimpse of Ulgric and Dovenald, the founders of the family to whom we owe the erection not only of Lincluden Abbey, but also of many other edifices, chiefly ecclesiastical, in our own locality. The name Owen Galous appears in the early part of the eleventh century annals as a ruler over some Celtic tribes; and, says Mr M'Kenzie, in his valuable *History of Galloway*—"There is a considerable probability that this chief was descended from Dunwallon—the British form of the Irish

Dovenald, Donal, or Dowall ; and the epithet Galous may be considered as establishing a kind of connection with Galloway." The two chiefs already named are supposed to have been descendants of Galous ; and it was they who fought and fell in the Battle of the Standard, while leading the Galloway contingent of the Scottish army. They were succeeded in the lordship of the province by Fergus, who is best remembered as the pious founder of the Monasteries of Tongland, Whithorn, and Souleseat, the Priory of St. Mary's Isle, and the Abbey of Dundrennan. He died at Holyrood Abbey in 1161, first, however, appointing his two sons, Uchtred and Gilbert, his successors. His chief residence was the Castle of Loch Fergus, built on a rocky islet that rose out of a lake near Kirkcudbright, long since drained away. Uchtred, walking in the footsteps of his peace-loving and pious father, dedicated a considerable amount of his worldly substance to the Church. Hence in due season arose the fair Abbey with which his name is associated, and "the grey ruins of which still held to keep his memory green." Gilbert, a man of quite another stamp, wishing to acquire the entire lordship of the province, murdered his brother Uchtred in 1174, at Loch Fergus Castle, under circumstances of the most revolting cruelty. Mr M'Dowall described at some length the connection of the royal house of Bruce with Uchtred, shewing that the Bruce of Bannockburn was a lineal descendant of the Lords of Galloway, he being the great-grandson of Gilbert, the fratricide. After noticing Alan Lord of Galloway, his daughter Devorgilla, and many more of Uchtred's relatives, including our present Queen, Mr M'Dowall stated that the connection of the Bruce family was renewed with Uchtred and Lincluden when the great-granddaughter of the hero king, the Princess Margaret, widow of Archibald Douglas Lord of Galloway, died, and was buried in the Abbey, the gorgeous tomb which received the dust of the illustrious lady still, though sadly marred, revealing striking traces of its original beauty. There the remains of the Princess were laid, an inscription on the walls above setting forth her name and titles ; and a full length stone effigy laid over the sepulchre, portraying the lineaments of her who slept below. Quite recently during the work of excavation carried on at the Abbey, the figure of the Princess, in a mutilated condition, was discovered, after it had been lost for nearly a century. This was a rare prize ; and the writer was not without the hope of seeing the figure restored, and placed anew in its

original position. Should Her Gracious Majesty Queen Victoria ever come to this part of the country, as it was lately expected she would do, she might, he thought, be asked, with perfect propriety, to visit the house built by a far-away forbear in a remote age, and in which lies interred the dust of one of her royal progenitors. With the exception of the Abbeys of Holyrood, Melrose, and Dunfermline, there is no monastic house in Scotland that Mr M'Dowall knew of with which there is intertwined so many distinguished family ties as Lincluden. A rare piece of architecture, it is also full of historic suggestiveness, and to its ruined mural crown a bright poetical halo has been given by the genius of Burns. All the more grateful should we be, therefore, that the decay of Uchtred's Abbey has been arrested, and many of its long-hidden features brought to light by the present liberal representative of a renowned Nithsdale and Galloway family—Captain Maxwell of Terregles.

The Chairman, in moving a vote of thanks to Mr M'Dowall, said the paper just read was really so very important in itself that it ought not to be confined to the ordinary publications of the Society; and he suggested to the excursion committee that they should arrange during the summer months for a visit to Lincluden Abbey, and that Mr M'Dowall and Mr Barbour should be asked to accompany the excursion, and give them the benefit of their knowledge regarding the history and architecture of the venerable pile.

II. *Zymotic Diseases, their Cause and Cure.* By Mr J.

WILSON, V.P. (Abstract).

After noticing the various diseases which belong to the zymotic class, Mr Wilson said that until a few years ago it was the general opinion that they were caused and propagated by decaying organic matter, which was everywhere present, and especially in the fall of the year. Now it was established beyond question that such was not the case, but that these diseases were due to microscopic organisms having obtained an entrance into the system, and there produced the disturbances which characterised the different diseases. He next traced the history of the "Germ Theory," from Schwann's discovery of the yeast ferment in 1836 to the present time, and briefly referred to the investigations of Pasteur, Tyndall, Lyster, Budd, Miquel, Cohn, and Koch, which led to its adoption.

These microscopic germs were arranged in a class by themselves under the name *Schizomycetes*, or splitting fungi, and were placed between the algæ on the one side and moulds on the other. They were divided into four principal groups, viz.—*micrococci*, *bacteria*, *bacilli*, and *vibrios and spiral microbes*; but this like all other classification, was only a matter of convenience, for in appearance they closely resemble each other, and the dangerous ones—*pathogenic*—can scarcely be distinguished from the *septic* or perfectly harmless ones. Having described several of the germs and exhibited microscopic drawings of a number of them, he referred to the multifarious modes by which infection can be spread—by direct contagion, by infectious matter from diseased persons escaping from sewers, &c., being introduced into water, foods, or articles used for culinary purposes, and by the inhalation of vitiated air. He believed that before the disease was propagated there must be certain conditions favourable to the growth and development of the germ. For example, if seed were sown on a macadamised road it would not grow for want of sufficient nourishment; but if in a cultivated field, it would have all the conditions favourable to its growth. In the case then of the germs of disease, they must have the suitable *nidus* or else perish.

There are other conditions governing the spread of disease, such as predisposition through weakness or other causes. Although the germs of the different diseases have some things in common, they do not always attack the system in the same manner, for each disease has its own characteristic. The germ of diphtheria (*micrococcus diphtheriticus*) attacked the throat, while those of cholera and typhoid fever attacked the alimentary canal.

In reference to their cure, the well-known axiom, "prevention is better than cure," was all that he would then offer, but as to how "to prevent" the disease he said—1st. Limit the sphere of action by complete isolation of the diseased; 2nd. Fresh air, and plenty of it; 3d. Thorough disinfection. Having described a number of experiments made with disinfectants, he recommended chloride of lime as the cheapest and one of the best, but it had a disagreeable odour, and was detrimental to colours, &c. Solutions of permanganate of potassium were good, and could be easily used, also carbolic acid, and the various powders containing it, and sulphur and sulphurous fumes. One of the best was a solution of mercuric chloride, but this was a deadly poison, and he did not recommend it for that reason. In conclusion, Mr

Wilson referred to the prevalence of fever in Dumfries during the past autumn and the preceding one, and asked if the cause of this was not traceable to a want of due regard to the sanitary laws? In his opinion he believed it was, and for that state of affairs he held the Local Authority responsible, for that body neglected to put in force the powers conferred upon them by Acts of Parliament. The open sewers and middens throughout the burgh might be compared to nursery gardens, in which the germs of disease were "forced," and from which they were disseminated far and wide, carrying with them disease and death into many bright and happy homes. Until the authorities remedied these unsightly and dangerous nuisances, every case of fever in their midst would be a stain on the fair escutcheon of their royal and loyal burgh.

7th March, 1884.

Dr GILCHRIST, President, in the Chair. Thirty-two members present.

New Members.—W. H. Maxwell, Esq. of Munches, was elected a Life Member; and Messrs D. Carnegie, Castlebank; and E. McGowan, English Street, were elected Ordinary Members.

Donations.—Mr Wilson presented, on behalf of Mr Carnegie, six old copper coins found by the donor in his garden in the neighbourhood of Montrose.

Exhibits.—The Chairman exhibited, on behalf of Miss Gillies, a fine section of a stalagmite, a case of copper ores, a nugget of native copper, and a piece of the brain coral. Mr Hogg exhibited a box of shells from Aden, a "potato stone," a fine old flint pistol, an ancient tobacco-box found in the Highlands, and a piece of black limestone from Niagara.

COMMUNICATIONS.

I. *The Destruction of Beasts and Birds of Prey.* By Mr W. J. MAXWELL, Terregles Banks.

The subject of which I am to speak is not of scientific interest alone, and it is not as a scientific question that I intend to deal with it. I leave that to some member of this Society more deeply versed in natural history than I am. I wish, rather, to draw attention to the practical or

utilitarian view of the question, in the hope that something may be done before it is too late to check the indiscriminate destruction of the native beasts and birds of prey. One of those predatory animals, the fox (*canis vulpes*), I may pass over. There is no fear of foxes being exterminated in this district for some time to come, either by fair or foul means. The badger (*meles taxus*) and polecat (*mustela putorius*) may, I suppose, be considered extinct hereabouts, although I can recollect when the latter animal was quite common; and, indeed, I remember, when a boy, seeing a nest of young ones dug out of a hole in our own garden. The same fate which has befallen the polecat seems likely soon to overtake the stoat (*M. erminea*), a more useful animal, in my opinion, and one deserving of more consideration than he has hitherto met with. I look upon the stoat as our best protector from the legions of rats which now threaten, not only to eat us out of house and home, but even to pull down the very houses in which we live. The country simply swarms with rats. Every ditch and burn is infested by them, and therefore, though there is an endless number of different ways of killing or driving them away from houses, all those various expedients, however ingenious, are in vain except as means of obtaining temporary relief. As soon as one batch of rats is killed off or expelled, a fresh lot are ready to take up the quarters they have vacated. The only effectual check upon the rat is the stoat, who hunts him down with deadly pertinacity in his favourite haunt—the ditch or running stream. Although the rat can swim like a fish, and can thus escape from a dog or cat, he has a poor chance of saving his life when pursued by a family of stoats. As I have seen myself in the days when stoats were plentiful, they hunt the rat as a pack of foxhounds hunt the fox, and can boast of a much larger percentage of kills. The stoat is undeniably an enemy to game, and is therefore very naturally an object of hatred to the gamekeeper. It would be unreasonable, I think, to blame the keeper for waging war against an animal which he looks upon as a dangerous enemy to the game which it is his duty to protect. Admitting, however, that the stoat is a poacher, and destructive to game, is there not good reason for believing that the rat is as bad? Would not a few stoats be a lesser evil than legions of rats infesting every brook and every hedgerow, and doubtless robbing many a partridge or pheasant's nest? When we consider the large number of rats that two or three stoats would kill in

the course of the year, it certainly seems as if it would pay best to leave the stoat alone. Undoubtedly, the rat is capable of atrocities which the stoat would never think of. For example, at a farm steading not far from here, I heard of their killing and devouring two young pigs; and this was not all. They afterwards killed a calf. At this rate, it is not unlikely that before long they will kill a cow, and they may not stop there. They have frequently been known to attack man. If the stoat is to be saved from extermination there is no time to be lost, as he is already becoming a very scarce animal, and probably the next four or five years will see the last of him in this district. The common weasel (*mustela vulgaris*) is still frequently to be seen, but I doubt if he is such a formidable enemy to the rat as the stoat. He is a very useful little animal, however, and should be protected by law. The hedgehog (*erinaceus Europæus*) is also sadly in want of some such protection. He is fast being exterminated, and will probably soon be extinct, although only a few years ago so common that one could scarcely take a walk in the fields on a summer evening without seeing several, usefully employed hunting for slugs in the dewy grass. As slugs form the chief food of the hedgehog, it is obvious that he must do an immense amount of good in that way, probably far more than we realise. Now that the blackheaded gulls (*larus ridibundus L.*) have become so scarce hereabouts, I don't know of any other check to the increase of slugs, and everyone who has anything to do with gardening knows what damage slugs can do. Why do not those who have walled gardens keep a few tame hedgehogs? I don't know whether slugs are more numerous now than they used to be, but certainly they are now a very serious pest, and will increase when there is no check upon them. Two years ago I saw a field of newly braided oats so covered with small grey or white slugs that there must have been on an average at least thirty or forty to the square yard, and they very nearly destroyed the crop altogether. This state of things may not be due to the destruction of hedgehogs, but I am at a loss to imagine any more likely cause. Among birds of prey, undoubtedly the owl is most deserving of protection, and it is protected to a certain extent by law; that is to say, it is included in the schedule appended to the Wild Birds' Protection Act of 1880, and therefore any person killing owls between 1st March and 1st August is liable to a penalty of £1 per bird. This Act is not very strictly enforced,

however ; and probably it is a good deal more in favour of the owl, that at well regulated covert-shootings owls are not shot when they make their appearance, as they often do on such occasions. Although, I don't think the owl is getting much scarcer in this neighbourhood, it is far from being treated as such a useful bird deserves. Where pole-traps are allowed there must always be a large number of owls killed. The kestrel (*Falco tinnunculus*), also a harmless bird, living chiefly on mice, cockchafers, &c., falls a victim to this hateful invention. The only other hawks we know of in this district, are the sparrow-hawk (*Accipiter nisus*), the buzzard (*Buteo vulgaris*), and the merlin (*Falco Esalon*). They are all looked upon as deadly enemies to game, and I am not prepared to say that they do not kill game. To say that game forms any considerable portion of their food, I think, is nonsense. There is nothing in the fact of a bird being in the game list to make it more attractive to the hawk ; as game must form a very small item in his style of living. Admitting that these hawks are enemies to game, there is still something to be said in their favour in the interests of sport. Anyone who has read the reports in the newspapers regarding the opening day of the grouse-shooting, must have observed that the grouse are always not only extremely scarce, but extremely wild and difficult to approach. Why is this the case ? It is because in most cases the only enemy the grouse have to fear is man, and they find that the best way to baffle him is to rest on bare, exposed places, where they command a good view of the surrounding country, and can withdraw, chuckling at his discomfiture, long before he gets within shot. The grouse do not adopt these tactics where hawks abound. There they know no shelter except under the brown heather, where even the keen eye of the enemy overhead fails to detect their cowering forms. Some time ago I saw a letter in *The Field*, from the owner of a grouse moor in the Hebrides, stating that in consequence of his not allowing birds of prey to be killed on his moor, he was enabled to shoot over days the whole season, and thus have good sport without resorting to the driving system. There is, therefore, something to be said even for the sparrow-hawk, the buzzard, the peregrine falcon, and the merlin, from the sportsman's standpoint ; while, as for the other animals to which I have referred, the balance of evidence is in favour of their preservation. In these days of associations for all purposes under the sun, I think it is high time there was an association for the

protection of wild animals useful to man. It will soon be too late.

II. *Notes on Lincluden Abbey.* By Mr JAMES BARBOUR.

(The following includes communication read on 7th December, 1883):—

The ancient Religious House of Lincluden stands in a sequestered nook at the confluence of the river Cluden with the Nith. The ruin, in outline and colour, forms in composition with the landscape a pleasing and beautiful picture; and on close examination it exhibits architectural details rich, elegant, and of a boldness unusual, arranged and combined with harmony and taste, and admirably executed.

The plan of the Church comprises a Nave, with North and South Aisles; a South Transept or Transeptal Chapel, a Choir, and a North Sacristy.

The buildings are wholly roofless, and much of the masonry has been broken down and carried away. Of what still exists, the walls of the Chancel and Transept are nearly entire; most of the south wall of the South Aisle and a small piece of its west wall remain; the foundation of the west wall of the Nave exists, and traces of the north wall of the North Aisle and of some walls outside the north-west corner of the Church. The walls of the Sacristy are nearly entire, and considerable portions of the masonry of the "Provost's Lodging" continue standing.

The Architecture mainly is late Decorated, but fragments of other types also are found, each characteristic of the different periods when the buildings were erected. The specimens of the earlier styles were long covered by *debris*, and their existence has only now been brought to light through the clearing of the ruins recently undertaken by Captain Maxwell of Terregles. There are early English details, and also one or two stones bearing the peculiarities of the Norman style. These early remains are characteristic of the age when the first Foundation was granted for an Abbey at this place, and naturally they and the Abbey to which they belonged will fall to be considered first.

THE ABBEY.

The Abbey was founded by Uchtred, son of Fergus, Lord of Galloway, a little prior to the year 1165; and of the fabric of the Abbey Church, all knowledge of the design of which was

lost, the following description, gathered from the now uncovered remains, will present for the first time a sketch of some of its features :—

Of these early remains there is, *in situ*, at the north-east angle of the Nave, and attached to the wall of the Chancel, the base and part of the shafting of a respond or half pier, upon a pedestal. The respond measures three feet and half an inch across, from north to south. Part of the plinth of the eastmost pier of the North Arcade also remains *in situ*. Several pieces of cylindrical piers have been found, which give a diameter corresponding to the measurement across the respond mentioned ; and a fragment of a base moulding corresponding to that of the respond also exists. There remains a large number of arch stones, which went to form the Arcade arches connecting the piers. The arches have been pointed, and of two plain chamfered orders, with a string or hood moulding over them.

There are three stones, parts of arch rings, of very distinctive character. Two are moulded with a roll on the angle, a fillet and hollow on the soffit, and the zig-zag ornament on the face ; and on the other is worked an angle roll, and the zig-zag ornament on both the soffit and the face—the most characteristic ornament of the Norman style. The stones almost certainly formed part of the doorway of the Church, a feature which in Scotland retained something of the Norman type after the style had otherwise become obsolete.

Numerous fragments of windows remain—pieces of mullions, tracery, and arch-shaped tops. One piece of tracery is grooved for the reception of cusping after the manner of the earlier windows of New Abbey ; and the arch-shaped tops are also cusped apparently into trefoil forms. These fragments are early English, and of a somewhat more advanced type than was prevalent at the period of the foundation.

In addition to the architectural fragments described, some of the foundations and traces of walls remaining appear also from the character of the masonry to belong to the earlier building. The walling of the later work of the Church is faced with finely hewn and closely jointed ashlar, while that of the earlier work is faced with rubble, roughly dressed, and with wide joints. Of this latter description are the remains of the west wall of the Nave and all the north side of the Church. The steps of the west doorway, which remain *in situ*, and the foundation of a stair at

the west end of the North Aisle, which led to the Dormitory, also belong to this period.

Putting together the fragments described, and following out the design to the extent indicated by them, there is presented an outline of a considerable portion of the Church. It was entered by a western doorway, with a semi-circular arched top, of at least two orders, moulded and enriched with the zig-zag ornament. From the threshold the Church was approached by a descent of two steps. Within was presented a Nave, measuring 56 feet from east to west, and 20 feet from north to south; a North Aisle, 13 feet in width, including the Arcade; a Chancel of equal width with the Nave, which, in accordance with the arrangement prevailing at the period, would likely be much shorter than the existing one; and there would probably also be a South Aisle, but of this no remains exist.

The Nave was separated from the Aisles by Arcades of four bays, the piers of which were cylindrical, with moulded bases, resting on square plinths, splayed on the top. The eastern responds were shafted, with moulded bases, and recessed and chamfered plinths, raised on pedestals, which received the ends of the steps leading to the high altar; and the arches which joined the piers were pointed, and of two chamfered orders, with a string or hood moulding over them.

Some of the windows of the Abbey were single lights, cusped at the top, and some were divided into two or more lights by mullions, their tops being filled in with plain and rather heavy cusped tracery.

The Dormitory extended northwards from the west end of the Church, and was reached by a stair within the North Aisle; its south wall was in line with the North Arcade or nearly so, and its east wall was so situated as to shorten the North Aisle a little as compared with the Nave.

The Church was a small one, and not ornate; it was characterised by the simplicity and chasteness peculiar to the types of Gothic architecture prevalent at the period of its foundation—the period when the greatest number and the grandest of the ecclesiastical buildings in Scotland were erected.

THE COLLEGIATE CHURCH.

At the time of the erection of the Abbey, and from the commencement of the great church building era, about the middle of

the eleventh century until the breaking out of the war of independence, the architecture of England and Scotland was in agreement. The Norman style, in which the earliest churches of the era were built, gradually underwent transition, culminating in Early English, and that again reaching maturity began to undergo change towards the Decorated style, when the progressive development was suddenly checked in Scotland by the breaking out of the war, and for a long time church building there continued in abeyance. Meanwhile, in England, the Decorated style of architecture became matured, and it, in its turn, was superseded by another, the Perpendicular style.

When, about the end of the fourteenth century, Scotland had in some measure recovered from the effects of the war, church building revived. This revival period presented two great changes compared with the earlier epoch. Formerly the Religious Foundations, not Parochial, were chiefly Cathedral or Conventual; now they are Collegiate. The other great change relates to the architectural character of the fabric. The thread of the development reached at the commencement of the war is not taken up, nor is the expanded English type adopted. There is generally found in the churches of the period a mixture of styles, some of the earlier Home forms being introduced along with advanced Decorated, exhibiting peculiarities supposed to indicate French influence.

Our own district furnishes, in Sweetheart Abbey, founded in 1275, one of the latest foundations in Scotland of the earlier epoch; and here, at Lincluden, is one of the earliest of the new order and the revival period.

Archibald, third Earl of Douglas and Lord of Galloway, in the reign of Robert III., abolished the old Conventual establishment at Lincluden, and superseded it by a Collegiate foundation. Although the re-building of the Church receives no historical mention, and is not necessarily implied by the change effected in the order of the Foundation, the remains sufficiently indicate that the greater part of it was about this time re-erected. The architecture exhibited by the remains of the Abbey and that of the remains of the College, appearing side by side, one characterised by simplicity and massiveness, and the other by profusion of richness, points to the intervening of centuries between their epochs; and as the former is distinctive of the time of the early foundation, so is the latter of the epoch of the new foundation.

The heraldry on the walls of the Church also sufficiently attests the connection with it of the Douglas family.

The new building, although it would probably be the design of its founder ultimately to extend it so as to embrace the re-building of the whole Church, had stopped short of completion, and a part of the older erection, the remains of which have been described, continued to exist until the time when the establishment was finally dismantled.

The remains of the Collegiate Church embrace the Chancel, the South Transept or Transeptal Chapel, the South Aisle, and the Sacristy; and two vaulted chambers north of the Sacristy also belonged to this period.

This Church, like that of the Abbey which preceded it on the same site, is of small extent, but it stands out unsurpassed by any of its class for the boldness, richness, elegance, and purity of its architecture.

Externally the noticeable features of the building are—the far projecting buttresses, rising to the height of the side walls unbroken by any intake; the large double base table, extending round the bottom of the walls; the cornice, decorated with richly carved foliage, on the top of the south wall of the Chancel; the well-proportioned pointed windows, enclosed in peculiar and very bold mouldings, hooded, and originally divided by many mullions and rich geometrical tracery, inclining to leaf and flame forms, of which little now remains.

The buttresses are of uniform design, and placed at right angles to the walls, except at the Transept, where they project diagonally from the corners.

The windows exhibit uniformity in some of their parts, and in others much variety. The lights in all cases stand in the centre of the wall, the jamb mouldings are continued on the arches, and their internal and external orders are respectively alike, as are also those of the mullions and tracery, except in the case of the east window of the Side Chapel, where they are dissimilar. The principal mouldings of the Chancel windows and of those of the Aisle are similar, but whereas the mullions and tracery in the Aisle have hollow chamfers only, those in the Chancel have edge rolls in addition, with bases and caps to the mullions. The two windows of the Side Chapel differ from all the others as regards their mouldings, and also from one another. The tracery of the two westmost windows in the south wall of the Chancel corre-

spond respectively in design to that of the two small windows opposite in the north wall, otherwise the arrangement of the tracery has in no two windows been alike.

Internally a much more correct idea of the Church can be formed now than was possible before the carrying out of the recent excavations. Entering at the west end, the plinth or lowest stone of the west respond or half pier of the Arcade is found remaining attached to the foundation of the west wall. The east respond, attached to the west wall of the Chancel, remains entire; and in the floor, which is of pavement, are three blanks where three pillars, no part of which now remains, have stood. The Arcade has been of four bays, its pillars shafted and placed diagonally, the capital of the east respond being moulded only, while that of the west respond, which has now been recovered, is richly floriated; its arches have been segmental, as indicated by a small portion of the eastmost one remaining, and it has extended across the front of the southern projection, which is therefore not properly a Transept, but a side Chapel. The side Chapel and the Aisle have been vaulted over at a uniform height, with groined and ribbed vaulting, and there has been an apartment over the Chapel, probably a *Domus Inclosi*, lighted by a small double window in the top of the gable, and approached by a newel stair within a projection at the angle formed by the Chapel and the Chancel.

Upon the walls of the Aisle and side Chapel remain part of the moulded ribs of the vaulting, supported on shafts with floriated caps and sculptured corbels. A little of the vaulting itself also remains, and it has been constructed of rag-work, that is, small flat bedded stones, in this case half an inch to three inches in thickness, and entirely unhewn, set in thick beds of mortar. An etching by Storer, published in 1805, represents a portion of the vaulting or vaulting ribs as continuing at that time to span the Chapel.

The Chapel is provided with a *Piscina* in the south wall, where the priest emptied the water in which he washed his hands; on its east wall is a carved image bracket; and there is evident provision for an altar in the circumstance that the sill of the east window, before which it would stand, is at a higher level than that of the south one.

Separating the Nave from the Chancel is the Rood Screen, in this instance of stone, and over it the Rood Loft and the Chancel

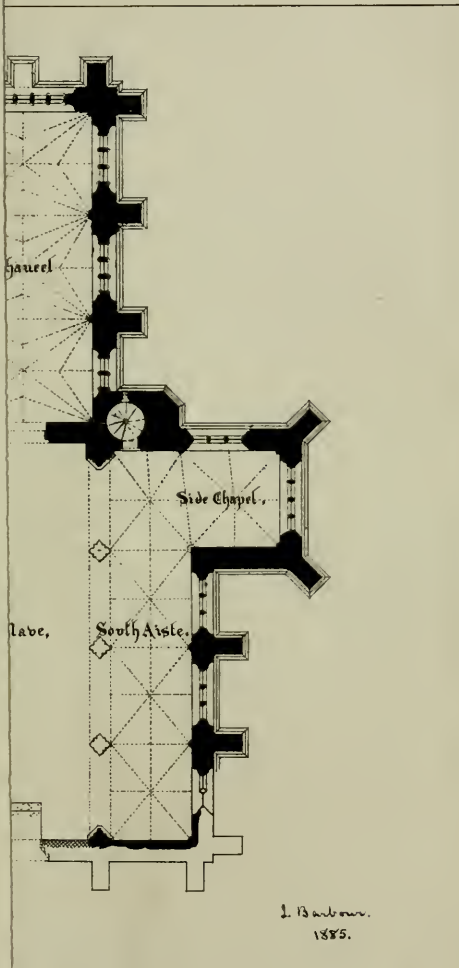
Arch. Under the Rood Loft, on either side of the screen, are corbellings, on the west side of sculptured figures, and on the east of very large leaf work. The Chancel Arch is a segmental pointed one, and the imposts are shafted, with floriated capitals similar to that which had belonged to the west respond of the Arcade.

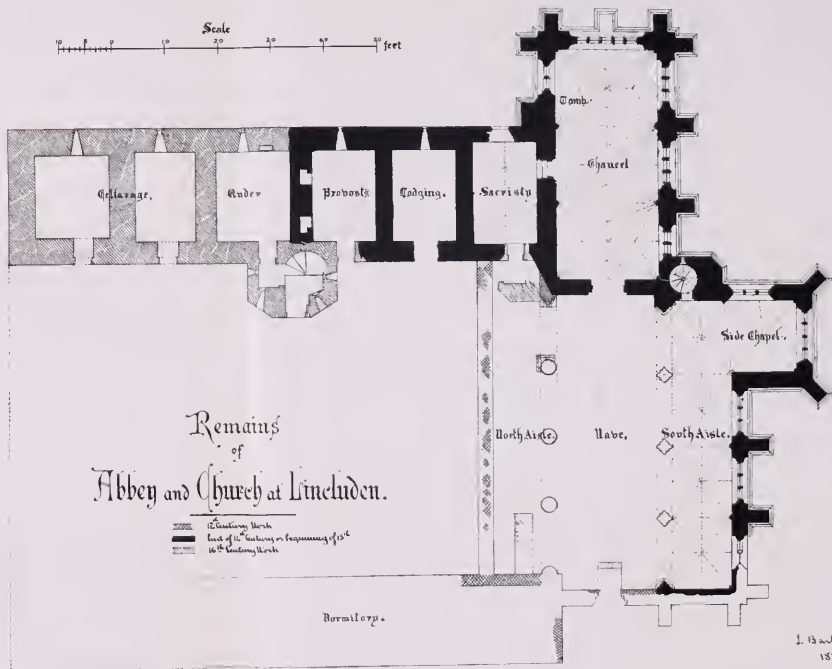
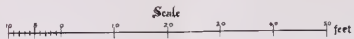
Entering the Chancel the eastern window is seen to occupy nearly the whole width of the wall and extend upwards to the vaulting. Below the window are corbels which supported the slab of the High Altar, and on its sill is a small carved image bracket. In the south wall are a triple Sedilia or seat for the officiating priest and his attendants, and a Piscina; and in the north wall the tomb of Margaret, Countess of Douglas, all of very beautiful design and workmanship, and in their parts bearing considerable resemblance to one another.

The Chancel was roofed by groined and ribbed vaulting in three divisions, the vaulting shafts and parts of the ribs being still upon the walls. The design has been a very beautiful one, and bore considerable resemblance to that of a later church—Holy Trinity, Edinburgh—of the roof of which Mr T. S. Muir remarks—“A more expressive and chastely designed roof than that over the Choir and Apse is seldom anywhere to be met with. The finely moulded groin-ribs gradually breaking apart from the clustered stems and ramifying along the edges of the various cells, the heavy longitudinal rib with its bold mouldings, and the numerous and variously sculptured bosses, with their jutting bud-like forms and symbolic leafage, produce an extremely rich, graceful, and satisfactory effect.”

Over the vaulting of the Chancel, as in the case of the side Chapel, there has been an apartment to which access was got by the newel stair before mentioned, and the apartment was roofed by plainstone vaulting with large chamfered transverse ribs. Of the upper vaulting only a little at each side above the springing remains, but it was complete when Grose visited the ruins in 1789, and an etching by Storer in 1805 represents one of the ribs as then in position.

The Sacristy is a north one, and access to it is by a rich doorway in the wall of the Chancel. There is a descent of three steps to the room, and it has been roofed, in two divisions, by segmental groined vaulting of rag work, with plain chamfered ribs, springing direct from the walls without shaft or corbel.





Arches.—The Arches are of various forms : that of the eastern window is obtuse pointed ; that of the south window of the side Chapel is segmental pointed ; and those of the remaining windows are equilateral pointed. The doorway of the Chancel is arched square-headed, the corners only being rounded, a form common in France and unknown in England. The Chancel arch is segmental pointed, and the arches of the Arcade have also been of that form. The top of the Tomb is obtuse pointed, almost half round ; the tops of the Sedilia are equilateral pointed ; and that of the Piscina is ogee pointed.

Mouldings.—The hollow chamfer is common. On the jambs of the Chancel and Aisle windows it is very large and a full quarter circle in depth ; mostly it is not much sunk. The filleted roll appears to be the predominating moulding. The plain roll is common, and rounded and feathered rolls also occur. The mouldings are strictly geometrical, their orders are few in number, and lie mostly in the wall and soffit planes, and the composition is simple, bold, and effective.

Bases.—The bases of the window shaftings are composed of an elliptical-torus astragal following the plan of the shaft, a bell-shaped ogee moulding, octagonal on plan, on a high octagonal plinth ; and in the case of filleted shafts, the fillets are continued on the bases and plinths. The pier base is composed of an ogee astragal following the plan of the shaftings, a bell-shaped ogee moulding, polygonal on plan, and a low plinth square on plan, with the points cut off, placed diamond ways.

Capitals.—The capitals of the window shaftings have undercut neck mouldings following the plan of the shaft, richly floriated bells, and torus-moulded abaci, octagonal on plan ; and in the case of filleted shafts, the fillets appear on the bells above the carving and stop against the abaci. The capital of the pier is composed of a neck moulding and bell, following the plan of the shaft, and an abacus of two filleted rolls divided by a deep hollow, similar on plan to the plinth of the base. The capitals of the imposts of the Chancel Arch have mouldings similar to that of the pier, and the bells are floriated.

Ornamentation.—The building is rich in floriated embellishments. The tabling of the south wall of the Chancel, the corbeling on the east side of the Rood Loft, and the capitals of imposts and shafts, as has been already indicated, are so enriched, as are also the Sacristy doorway, the Tomb, the Piscina, and the Sedilia.

Ornamental foliage surrounds many of the shields, and many of the bosses of the roof have also borne this description of decoration. Two groups of oak leaves and acorns on the front of the Piscina are closely after nature, otherwise the floriated work is less natural, and many of the leaves are marked by the peculiar well known conventional arrow-head points, the barbs of which are turned round in the form of a volute. The floriations of the capitals of the vaulting shafts are peculiarly free and graceful, and generally all the decorative work is well disposed, sculptured with great boldness, and its effect is rich and pleasing.

SCULPTURE.

Medieval sculpture at this period had obtained its highest development, and in gracefulness of design and beauty of execution it rivalled the works of ancient Greece and Rome. On this small building there is more sculpture, and the work is of greater merit than is apparent at first sight. The figures are so broken and abraded that they have the appearance of rudeness. Many have almost ceased to retain any resemblance to sculpture, and it is only after a careful study of them that some appreciation of their original excellence is gained.

The effigy of Margaret, Countess of Douglas, which lay upon the Tomb, has been recovered. It is broken into two pieces, and so disfigured, that it is with difficulty the details can be followed. The head of the recumbent figure, which appears to have been crowned, rests on two cushions, the hair hangs down in long ringlets, one on either side, and the hands are crossed upon the breast. The lower of the two cushions is oblong, and lies crossways, and the upper one is square, and lies upon the other diagonally, and both are tasseled. Upon the lower part of the dress is a small portion of ornamental detail, the cushions exhibit corded seams, and on one of them is represented minute and beautiful braiding, the whole leading to the conclusion that the figure, instead of being, as it seems on a casual inspection, rude, has been executed in all its parts with the utmost minuteness and care; and without doubt it has been a work of art fitted to cover the remains of a princess and adorn this beautiful Church.

The trunk of another small female figure, much broken, has been found, which also indicates great care and minuteness of

execution, and it probably occupied one of the two image brackets before mentioned.

The sculptured figures upon the west side of the Rood Screen are arranged in rows one over another. The middle row consists of about 18 figures, winged, their hands crossed over their breasts; the upper row represents heads, filling in the triangular spaces between the wings of the figures below them; and the lower row, which is much mutilated, has consisted of 25 to 30 figures, the southmost one holding a scroll, which has been inscribed. The lower sculptures were probably intended to represent the Birth of Our Lord and scenes in His life; and those above the adoration of the Heavenly Host.

Fragments of sculptured slabs have been recovered, evidently pieces of the breast work or parapet of the Rood Loft. The work is 2 feet 9 inches in height; on the face of it is arcading with ogee tops, and in every panel a sculptured figure in low relief. St. Paul is represented resting on a sword; St. John holding in his left hand a cup and pointing over it with his right; a figure holding in the left hand a book and something like a scroll in the right, there is no nimbus, but the face bears a striking resemblance to the usual representations of Our Lord; also another complete figure and a fragment. Over the arcading is some small incised Old English lettering, probably intended to be descriptive of the subjects. The length of the Rood Loft would admit of eighteen such figures, which, added to the three rows of sculpture before described, brings up the picture of this feature of the building to one of great splendour.

The westmost remaining vaulting shaft of the Aisle is supported by a figure; at the angle formed by the walls of the Aisle and side Chapel the vault ribs spring from a pair of figures; and the image bracket in the side Chapel is supported by a figure, winged, and holding a scroll uninscribed. Within the Chancel there are six figures supporting vaulting shafts, all winged; two of them are represented playing upon musical instruments, and two hold uninscribed scrolls.

Many of the bosses of the roof have borne sculptures—the *Agnus Dei* and other symbolic subjects.

The attitude of these sculptured figures on the walls can yet be observed, and through all the mutilation and almost obliteration of detail something of their power is still visible. The way in which they appear to spring from the walls, and support

themselves and the superincumbent shafts with ease, indicate vigorous conception and masterly execution.

HERALDRY.

The heraldry is in better preservation than the sculpture, and therefore it has the appearance of being the predominant decorative adjunct of the building. The charges are beautifully and delicately cut, and the disposition of the shields, along with scrolls and carved foliage, gives variety and relief to forms that otherwise might appear somewhat stiff.

There is no heraldry upon the walls of the Aisle, or side Chapel. This kind of decoration is confined to the Chancel and the Countess of Douglas' Tomb, and all the charges appear to have reference to the founder's family and connections.

On the front of the sarcophagus of the Tomb is arcading of nine panels, in each a shield, and, beginning at the dexter side, the blazonings are respectively:—A saltire and chief, for the Lordship of Annandale; a lion rampant for that of Galloway; three mullets, the arms of Murray; a man's heart, three mullets in chief, for Douglas; a field uncharged, a field nebuly, a field uncharged, a fess chequy, for Stewart; and paly.

Over the Tomb, forming a corbel for the support of a vaulting-shaft, is a shield bearing a lion rampant, within a border fleury; and on the south wall, forming a corbel for the opposite vaulting-shaft, is another shield bearing three fleurs-de-lis, the arms of France, crowned, and with dogs as supporters.

The tympanum of the Sacristy doorway is enriched with two shields, the dexter one bearing three mullets, and the sinister one a man's heart, on a chief three mullets, impaling a lion rampant, crowned. These probably represent the arms of the founder and his wife, although, according to the heralds, the wife's arms should occupy the sinister shield and not, as here, the dexter one.

There are other fourteen shields in the interior of the Chancel. On the north wall, beginning at the west, the first, second, third, and fourth shields are without charges, and attached to them are uninscribed scrolls; the fifth is a shield couchie, bearing three urchins—the arms of Herries. Sir Robert Herries of Terregles married Margaret, daughter of Archibald Douglas, the founder of the College. The sixth shield on the north wall is uncut.

On the east wall are two shields, the charges of the south one are obliterated; the north one bears three mullets impaling the first within a border fleury, probably for Murray and Douglas. There is on Bothwell Church, of which Archibald Douglas the Grim was founder, a shield bearing similar charges, but in the reverse order.

The remaining six shields are on the south wall, and, proceeding westwards, the emblazonments are—A man's heart, on a chief three mullets, impaling a lion rampant; on a field ermine a man's heart, on a chief three mullets; quarterly, first and fourth, a man's heart, crowned, on a chief three mullets; second and third, a lion rampant, crowned; within a border, quarterly, first and fourth a man's heart, on a chief three mullets; second and third a bend between six cross crosslets fitched, said to be the arms of the hero of Otterburn; on a bend, three mascles, and in the sinister canton a buckle. Round the shield is a scroll, inscribed *Loyal Dei* . . . Halyburton . . . and under it appears the initials J. H. The sixth shield bears a lion rampant.

On the Chancel walls outside are seven shields, three on the south wall, bearing respectively a bend engrailed, three urchins, a saltire between four mullets; two on the east wall, one within a wreath of beautifully cut holly leaves, bearing a saltire, the other bearing a fess chequy debruised by a bend engrailed; and two on the north wall, both uncut.

TOMBS.

The Tomb of Margaret, Countess of Douglas, has been so often and well illustrated and described that it is unnecessary here to notice its design; but in reference to its date, the constructive arrangement of the masonry appears to favour the conclusion that the tomb formed part of the original design, and was carried up along with the wall of the Chancel.

An interesting tombstone has been recovered from the *debris*. It is of red sandstone, measuring 8 feet by 4 feet, and lies in the south-west corner of the side Chapel, marking the grave of Alexander Cairns, the second Provost of Lincluden, who was also Chancellor to Archibald, 4th Earl of Douglas. An inscribed border extends round the four sides, and in the centre is a representation of a tree, surmounted by a shield bearing a fess, and an inscribed scroll, all incised. The stone is broken into three pieces, and the inscribed border is mostly obliterated. What

remains is in Old English character, and reads—“*Hic jacet Magister Alexander de Carnys . . .*” Not being able to read the legend upon the scroll, I sent a rubbing of it to Dr Frazer, and his reading of it is—“*Qui me calcatis pedibus prece subveniatis.*” (You who tread on me with your feet help me with your prayers.) Carnys probably died in 1422, when John Cameron became Provost of Lincluden.

A stone, which forms part of the pavement of the Aisle, and lies immediately west of the corner of the side Chapel, covers a grave. It has been inscribed in Old English character, but no part of the inscription can now be read.

There are two tombstones in the side Chapel besides that of Cairns, and one in the Nave, of after Reformation date. Those in the side Chapel have borders respectively inscribed—“*Heir · lyis · ane · honest · man · Alexander · Cooper · Mason · 1 · 5 · 8 · 8 ;*” and “** * · lyis · Robert · Cowper · Mearson · Bwrgis · of · Drowmfris · 161**.” That in the Nave is also inscribed round the border, and on its face is a sinking as if for the reception of a brass ; but being much broken, the inscription cannot be read.

Under the east end of the Chancel is an oblong vault, roofed by a plain cylindrical arch, to which access is got by a number of steps descending from the floor of the Chancel. The vault does not appear to have been built along with the Church. Its walls are not under but within those of the Chancel ; the character of the masonry is different from that of the Church ; the space in the floor of the Chancel occupied by the stair is so large as not to be adapted for being closed by the usual slab, and there is evidence that the vault has been secured by means of an upright door at the foot of the stair, the stair itself being probably left open. The vault was used by the Maxwell's as a place of sepulture, and was probably erected by them after the Reformation for that purpose. John, 8th Lord Maxwell, who was slain at the battle of Dryfesands, as stated in the “*Book of Carlaverock,*” was buried in Lincluden, 30th December, 1593 ; and, according to the same authority, “*Dame Elizabeth Douglas died in 1637, and her son Robert, 1st Earl of Nithsdale, gave her a sumptuous funeral, and afterwards transported her remains to the College Kirk of Lincluden, to be interred in a vault beside those of her first husbaud, John, Earl of Morton.*”

GLAZING AND FURNITURE.

Fragments of the glass and lead work of the windows have been found. The pieces are small, the glass is corroded, but enough remains to shew that the windows were of a variety of colours, and such as would be in keeping with, and enhance the effect of the rich architecture and sculptured decorations of the Church.

It is a fortunate circumstance that a small part of the stalls of this Church has been preserved. In the "Queer," attached to the Parish Church of Terregles, erected in 1583 by John, Lord Herries, for a place of sepulture for himself and his family, is the piece of furniture referred to, long known as the "Provost's Chair of Lincluden." Any one acquainted with church furniture will not hesitate to pronounce this work to be part of the stalls of a pre-Reformation Church; its architectonic style is in keeping with the Church of Lincluden; and the common connection of the Terregles family with Lincluden and with the Mortuary Chapel at Terregles would account for the removal of the stalls to their present position in the Chapel.

Two of the stalls are nearly complete, except that the back boards and canopies are wanting; and there are parts of a third stall. The work is of oak. The seat boards turn up in the usual way, and have the usual carved miserere, allowed by the Church as a sort of rest for relief to the infirm during the long services that were required to be performed in a standing posture. The points of the elbows are carved, and the back framing rises in a series of buttresses and pinnacles, richly decorated with carved crockets and finials. Carved pieces of the canopies also remain.

A unique circumstance came to light a few years ago respecting these remains. Captain Maxwell had undertaken the restoration of the Mortuary Chapel, within which, against one of the walls, they stood. The stalls being turned round, on some of the remaining boards forming the back, were discovered traces of paintings, two in number, in *tempera*. The more complete one is upon two boards; a third board, upon which a small part of it had extended, is wanting. This painting represents a female figure in a standing posture, the left arm crossed upon the right one. The features of the face are obliterated; the face itself is oval, the hair is yellow and long, hanging down upon the shoulders. On the head is a crown with alter-

nate fleurs-de-lis and short points. The inner garment is of a reddish brown colour, and the outer mantle, which is represented depending from the shoulders and arms in graceful folds, has a yellow border ornamented with lines and roundlets—probably the mantle itself has been blue—and the inner lining is white, representing a fur. The cloak is shown secured about the neck by a yellow band, and a ring through which the band passes. •

Of the second painting only a small portion remains. The head, and the hair, which is yellow, can be made out, but the face is obliterated. The cloak has been of a reddish brown colour with a yellow border. The left hand holds a cup, and the right one is represented pointing over it.

There is little doubt that the female figure represents St. Mary, to whom the Church was dedicated; and the other figure is a representation of St. John the Evangelist, as appears by the symbols. It will be observed that the symbols of St. John on this painting and on the sculptured stone slab, formerly referred to as part of the Rood Loft, are similar.

THE PROVOST'S LODGING.

The portion of the ruin known as the Provost's Lodging extends northwards from the Sacristy. The basement consists of five vaulted cellars. The first floor appears to have contained a square apartment at the north end, and the remainder of the floor formed probably the Great Hall. The second floor contained a north room, and the space over the hall would be divided into several rooms. The north part of the building only was carried up a third floor, forming a square tower with crow-stepped gables. The entrance door opened upon the octagonal staircase, and the stair gave access to the several floors. One of the cellars was entered from the staircase, and the other four by outside doors in the west wall. The windows of the rooms have been principally in the east wall, and would overlook the well formed gardens, the scarped mound attached to the place, the meeting of the waters, and an extensive tract of country beyond.

The octagonal Tower, most of the walls of the square Tower, and the greater part of the west wall extending between the square Tower and the Church existed in 1805. Now only the lower parts of the walls of the octagonal Tower, the Cellars, and the square Tower, to about half its height, with a piece of one corner of it of greater height, remain. The two cellars adjoining the

Sacristy appear to have been erected at the same time as the Church, the hewing being similar to that of the Church; the vaulting also being of rag work. The workmanship exhibited in the other portions of this part of the ruins is different and inferior, and quantities of slates and other material, which have belonged to some former building, are found embedded in the walls; the mouldings also are dissimilar to and of later date than those of the Church. Grose states that William Stewart, who was Provost about 1530, either rebuilt or greatly repaired the Lodging. Stewart's arms, which have been recovered, appeared upon the octagonal Tower, and a carved corbel, which was also upon the Tower, has been found bearing the initials of his name, V. S.

DEMOLITION.

A few words will suffice in reference to the demolition of the fabric. The after Reformation tombstones are proof, I think, that the building had, as early as 1588, become open and waste, and a place of common burial.

When Penant visited the ruin in 1772 the upper vaulting of the Chancel was standing; it had nearly disappeared in 1805, and now no part remains except the springings; and a small part of the vaulting spanned the Side Chapel in 1805, which has long since fallen. With these exceptions, the Church is now in much the same condition as it was in 1772; even the Tomb appears to have been then broken and abraded as it is now.

Considerable changes have, however, taken place on the Provost's Lodging since 1772. The west wall, a great part of the square Tower, and the octagonal Tower have fallen, the latter in 1851, as described in Mr M'Dowall's "History of Dumfries."

It is worth notice, regarding the influences at work, in connection with the dilapidation of the College, that the Heraldry, the insignia of the ruling class, remains uninjured, while the figure-sculpture, which at the Reformation was regarded as tending to idolatry, is ruthlessly mutilated.

This Collegiate Church—a little Cathedral in which the sumptuous service of the Cathedral, but on a smaller scale, was wont to be celebrated—has been, as its remains testify, complete in its structural parts, and in its accessories also; and the *tout ensemble* is one of remarkable magnificence. The architecture exhibited is pure, no reverting to Early English, and nothing dis-

inctive of the Perpendicular appears. The form of the Chancel door, the design of the window tracery and some of the mouldings, and the shield bearing the Arms of France, suggest French influence; but the architecture of Scotland at the period being indigenous, the forms were probably derived from several sources; their combination is exceedingly satisfactory.

Standing in the Nave, and looking eastwards, on the left hand would appear the more ancient Arcade and Aisle, the remains of the Abbey Church of Uchtred; on the right the less ancient Arcade, Aisle, and Side Chapel; and in front the Rood Screen and Loft, and the Chancel Arch, the former adorned throughout its length with a wonderful array of pictorial sculpture representing the birth of Our Lord and incidents in His life, and the Adoration of the Heavenly Host; also single figures of Our Lord, St. Paul, St. John, and many others. Through the opening under the Chancel Arch would be seen the beautiful groined vaulting of the Chancel roof, its ribs springing from shafts, with floriated capitals, resting on bold sculptured figures, and its multitudinous points of convergence united by bosses, moulded and embellished with leaf work and symbolic sculptured forms—one the *Agnus Dei*. Within the Chancel the High Altar, with its carved bracket and statue would meet the view; the Piscina, Sedilia, Tomb, and Priest's Door, all extremely rich in mouldings and sculpture or floriated ornamentation; the numerous Shields, with their heraldic devices and floriated surroundings; and the Oak Stalls, with beautifully carved ends, miserere, pinnacled, and canopies, and pictorial paintings of St. Mary and St. John, nearly life size. And in all places would be seen the beautiful traceried windows, filled with painted glass, serving to suffuse the Church, and combine and soften its parts with brilliant and varying hues of light.

4th April, 1884.

Dr GILCHRIST, President, in the Chair. Forty members present.

New Members.—Messrs R. Barbour, St. Christopher's, Dumfries; J. Craig, Solicitor, Dumfries; J. Patterson, The School House, St. Mungo, were elected Ordinary Members; Mr R. Turner, Glasgow, an Honorary Member.

Exhibits.—Mr F. Armstrong exhibited, on behalf of Mrs Hutton, a large silver coin of the Mexican Empire of Maximilian. Dr Gilchrist exhibited fine specimens of the lily *encrinite*, obtained by Mr Macfadzean at Matlock. Mr J. J. Clark exhibited two large cases of European shells, and several species of star fishes and sea urchins. Dr Grierson, Thornhill, brought for exhibition a number of natural history specimens, which he had recently received from South America. One of these was a monkey—name of species unknown—a little larger than the common one, having a very small round head, covered with light brown hair, and the body, legs, and arms densely coated with dark brown, almost black. He had shown it to Professor Traill, Aberdeen, who had failed to classify it.

COMMUNICATIONS.

I. *Orchardton Tower.* By Mr J. MATTHEWSON.

A short paper on this subject was read by Mr Barbour, in the absence of the author. Various measurements were given, and details of the structure; but as Mr Matthewson purposes describing it more fully at a future meeting, these particulars need not be given here.

II. *Surnames.* By Mr T. BROWN, M.A.

After examining the modes of naming adopted by our Scandinavian ancestors, into whose nomenclature the wolf and the bear enter largely, as types of ferocity and sagacity, he referred to the patronymics of ancient Greece and Rome, of the Hebrews, and of the European nations of the present time; and showed how the personal characteristics contributed largely to swell the list of surnames.

III. *A Geological Sketch of Annandale.*

By Mr GEORGE JOHNSTONE.

The Chairman read this communication, in which the author made particular reference to the northern portion of the district referred to in the title, and illustrated his remarks by a chart showing the different rock formations. The district is, said the writer, about twenty miles in length, and about eight in breadth, and is surrounded on three sides—N., E., and W.—by hills of Silurian origin. Within this area the Silurian rocks appear frequently at the surface—*i.e.*, along the banks of the Annan and its tributaries. The dip of the rock is generally about 80 deg., while at one place in the River Milk it is almost perpendicular. The Old Red Sandstone is found in the Burnswark group of hills, extending about five miles in length and about three-quarters of a mile in breadth. This rock is remarkable for the great quantities of white pebbles which it contains, and is similar in appearance to the Old Red Sandstone found on the shores of the Firth of Clyde. Burnswark itself is of volcanic origin. All the hills possess the peculiar rounded appearance of the glacial action, and the smaller elevations in the valleys show, where sections have been made, the unmistakable evidence of the boulder clay.

Summer Programme.—This being the last meeting of the Session, the following programme of the Field Meetings was submitted by the Secretary and adopted:—May—To Wood Castle, Spedlins Tower, Corncockle Quarry, and Raehills Glen. June—To Calkerbush, Southwick, and Douglas Hall. July—To Moniaive by Dunscore, returning by Barjarg lime-stone quarries. August—Neighbourhood of Moffat. September—Dornock, Kelhead, returning by Lochmaben. It was reported that the following members would, in connection with the excursions, prepare information for the members, or describe the places, &c., visited, *viz.*:—Dr Gilchrist, in Geology; Mr Wilson, Botany; Mr Barbour and Mr J. Lennox, Archaeology; Mr Maxwell, Fungi; Mr Lennon, Entomology; Mr Davidson, Mineralogy; and Mr Chrystie, Ornithology.

21st June, 1884.

Dr GILCHRIST presiding. Fifty members present.

A Special Meeting of the Society was held on this date at Two P.M., in Lincluden Abbey, to afford the members an opportunity of seeing the different parts of the ruin which had been uncovered by the recent excavations carried on by Captain Maxwell. Messrs Barbour and M'Dowall were present, and pointed out the different points of interest in the building, and gave a short account of its history. (For detailed description see the *Proceedings* for 1st February, 1884, and 7th March, 1884.)

In the earlier part of this month (June) extensive alterations having been made on Mr Muirhead's property at the foot of Friars' Vennel, the Committee visited the site on the 7th and 12th, with the view of examining some objects of antiquity laid bare by the excavations, and, if considered desirable, to carry the explorations further at the Society's expense. Mr Barbour was requested to watch the operations, and to collect sufficient data, if possible, to finally settle the disputed question concerning the number of arches which the Old Bridge originally had, and to report at a future meeting.

The following communication on the subject was read at this meeting :—

The Dimensions of the Old Bridge of Dumfries.

By Mr J. BARBOUR.

Following out the wishes of the Committee of this Society, I beg to make a short statement in reference to certain masonry found in the course of excavations at Mr Muirhead's property, Bridge Street. The old buildings on the south side of the narrow street, which extends between Bridge Street and Brewery Street, at a point exactly opposite the Old Bridge, were demolished to make way for improvements when in the course of excavating the foundations, the masonry referred to was brought to light. The Committee of the Society resolved upon an investigation, and with permission of the proprietor of the building site, and of the Town Council, they continued the excavations to the extent considered necessary.

The work, when cleared, was carefully examined, and I have, as desired, taken measurements of it and prepared drawings, which I exhibit.

The masonry consists of a wall starting from the east side of Bridge Street, and extending eastwards 10 feet 5 inches, thence in a direction south-east 6 feet 3 inches, and again eastwards 40 feet 4 inches, terminating in a line with the Brewery Street end of the buildings lying on the north side of the narrow street before mentioned. The depth at which the wall is founded varies, being upwards of 10 feet below the surface at Bridge Street, and 4 feet below the surface of the water in the river at the bridge, 4 feet below the surface at Brewery Street, and 6 feet midway between these points. The top line of the wall is also irregular, and the work varies in height from 9 feet or more at Bridge Street to about 4 feet at its centre, and $2\frac{1}{2}$ feet at Brewery Street; and it measures about 3 feet in thickness. The masonry is solid and strong. It is composed of the red sandstone of the district, well cemented together with lime mortar in which is a mixture of shells, and it is faced on one side, the south one, with hewn ashlar, in regular courses about 11 inches in height. The westmost part of the wall is in a line with the south side of the Old Bridge.

At a point $27\frac{1}{2}$ feet east of Bridge Street the wall is pierced by the remains of a culvert 4 feet 3 inches wide, the floor of which is 9 inches below the surface of the water in the river opposite. The opening continues northwards beyond the thickness of the wall, under the narrow street; its sides are of ashlar, similar to the facing of the wall, and rest on flat projecting foundation-stones, the edges of which are splayed and hewn like a base course; and its top appears to have been closed by arching.

The west end of the masonry is terminated by the remains of a large arch. Only the south end of the arch could be inspected, and it showed a projecting springing course, 12 inches in height, splayed on the top, and thirteen thin arch-courses, their thickness being about 6 inches. The arch ring is about 18 inches deep, and its angle is chamfered; it is of good and tasteful workmanship, and in excellent preservation.

I have now described the masonry, and I may be permitted to express the opinion that it has formed the east abutment of the Old Bridge built by Lady Devorgilla in the 13th century, which is known to have been originally of much greater magnitude than the six arches which still span the river.

In order that the full original dimensions of the Bridge may be

understood, I beg to submit the following measurements:—The existing Bridge consists of six arches, and beginning at the Maxwelltown side the dimensions are—1st arch, 32 feet 4 inches wide; 1st pier, 15 feet 2 inches wide; 2d arch, 27 feet wide; 2d pier, 14 feet 6 inches wide; 3d arch, 28 feet 2 inches wide; 3d pier, 15 feet 2 inches wide; 4th arch, 27 feet 9 inches wide; 4th pier, 15 feet 2 inches wide; 5th arch, 27 feet 7 inches wide; 5th pier, 15 feet 1 inch wide; 6th arch, 35 feet 5 inches wide. Total between the abutments, 253 feet 4 inches. The distance between the face of the east abutment now found and the west side of the sixth pier, which now forms the east abutment, measures 113 feet 2 inches, and deducting the width of three piers, 68 feet remains, which would give three arches of 22 feet 8 inches span each.

It follows that the old water channel of the Nith in the 13th century measured 366 feet 6 inches across, between the abutments of the bridge; that the bridge, including its abutments, extended to at least 457 feet, and it was a 9-arched structure. The remains also show that provision had been made in the east abutment for a mill lade in connection with the old Sandbed Mill, which was bounded on the north by the bridge, and was not above the bridge, for the culvert is at too high a level to have been the tail race.

On the motion of Dr Gilchrist, a vote of thanks was heartily awarded to Mr Barbour and also to Messrs M'Dowall and Starke for the trouble which they had taken in connection with the Bridge and the Abbey.

SESSION 1884-85.

3d October, 1884.

ANNUAL MEETING.

The Annual Meeting was held in the Freemasons' Hall, High Street, on the above date, when 22 members were present, and the President, Dr Gilchrist, occupied the chair.

New Members.—Mr M. G. Wallace, Terreglestown, was elected an ordinary member; Mr W. K. Robertson, of Edinburgh, and Dr Grant *Bey*, of Cairo, corresponding members.

Donations.—The Secretary announced the following donations:—Vol. II., Part III., of the Transactions of the Glasgow Archaeological Society, from that Society; the Annals of the New York Academy of Sciences, Vol. III. Parts I. and II., and the Sixteenth and Seventeenth Annual Reports of the Trustees of the Peabody Museum, from the Smithsonian Institution; Postold Sögur, Kong Christiern den Förstes 1448-1458, Krystallographisk—Chemistrie, Classification der Flachen, Vøxtlivet i Norge Etudes sur les mouvements de L'atmosphère and Myntifundet fra greslid i Thydalen, from the University of Christiana.

Exhibits.—Mr Rutherford exhibited a bronze celt found at South Cowshaw, Tinwald. Mr J. Wilson exhibited 40 specimens of the rarer plants found by him during the summer months, among which were—*Teesdalia nudicaulis*, from Locharbriggs; *Valeriana dioica*, from Ferniecleugh; *Epipactus latifolia*, from Carnsalloch, Kirkmahoe; *Genista anglica*, from Craigend, New Abbey; and *Andromeda polifolia*, from the Lochar Moss. Dr Grant exhibited and described a number of Egyptian antiquities, including rings, bracelets, bandages of mummies, pieces of papyrus with hieroglyphic writing, and several sacred beetles of the Egyptians—*Scarabæida*.

On the motion of the Chairman, the thanks of the Society were awarded to the donors and exhibitors.

The Secretary laid on the table "The Official Year Book of the Learned Societies, 1884," which he had been instructed to purchase.

SECRETARY'S REPORT.

The Secretary (Mr J. Rutherford) submitted the following report:—This being our annual meeting, it will now be my duty to lay before you a resumé of our proceedings during the last twelve months. Eight years have now nearly passed since the present Society was instituted, and it is very gratifying to find that the interest taken in the work—not only by its members, but by the general public—still continues. Scarcely a week passes without my being told by some one outside the Society that they “read with much interest the reports of our Society’s meetings which appear from time to time in our local newspapers.” I have little hesitation in saying that these excellent reports have been in a great degree instrumental in increasing our popularity, prosperity, and usefulness. At the beginning of the Session we had a membership of 197. During the Session 27 new members have been added; 20 from various causes have ceased to be members; 4 gentlemen have taken advantage of the new rule which was introduced during the Session constituting life members; and the roll now stands—Life members, 4; honorary and corresponding members, 15; ordinary members, 185—making a total of 204, being an increase of 7 during the Session. We have had the usual seven monthly Winter Meetings and five Summer Field Meetings. The average attendance at the Winter Meetings was 31·5, as against 34 in the preceding year; the average attendance at the Field Meetings was 20·4, as against 26 in the previous year. Although these figures show a slight decrease in the attendance at our meetings during the past Session, yet when we consider that we have had three Special Meetings, all well attended, we have no reason to doubt that the interest hitherto manifested in the work of the Society has in any way fallen off.

I regret to tell you that during the last Session we have lost from our locality our most distinguished coleopterist, of world-wide reputation, who has removed to Southampton. I refer to Dr Sharp, whose pleasing disposition and kindly manner endeared him to all who had the honour and pleasure of his acquaintance. At our monthly Winter Meetings fourteen papers were read, being the same number as the preceding year, and some of which were of a high-class nature. During the Session we have had six Committee Meetings, with an average attendance of 8·6. A

Sub-Committee was appointed to prepare the Society's proceedings of the past three years for publication, and get the same printed. This has been done, and by next meeting they will be ready for distribution.

The following specimens have been deposited in the Observatory Museum :—5th October, 1883—Collection of Mounted Charæ ; Ammonite and other Fossils ; December 26th—Silver Coin of Charles I. ; Catalogue of Antiquities in Brussels Museum ; *Parmelia* ; Par in spirit with salmon disease ; List of Foreign Correspondents to Smithsonian Institution ; Two old Books, dated 1682 and 1744 ; April 9th, 1884—Six Copper Coins, and one large Silver Mexican Coin. There still remains in the hands of the Assistant Secretary and other members the other books which have been presented during the year ; in the hands of the Secretary, the large Collection of Lichens and Mosses presented by Mr M'Andrew ; and in the hands of the President, the Geological Collection which was presented by himself, and for which there was no room in the Museum at the time. In closing this necessarily brief and imperfect report of our year's work, again allow me to express the hope that the same interest will continue to be manifested in the work of the Society as hitherto. There is no doubt whatever, that as we continue to pursue the study of nature, we will find that she gradually reveals herself in proportion to our application, and the result will not only be the acquirement of a certain amount of information, but there will be a great subduing of self, and an elevation of Him who created all things and pronounced them "very good."

The Treasurer (Mr James Lennox) submitted the following account of the funds of the Society :—

INCOME.		EXPENDITURE.	
Balance from Session 1882-83	£7 3 10½	Secretary's Outlay ...	£6 9 4
4 Life Members' Subscriptions	8 8 0	Treasurer's do. ...	0 5 3
145 Ordinary Members' do.	18 2 6	R. Johnstone for Printing	3 1 0
18 New Members' do.	4 10 0	Rent of Halls ...	2 10 0
Transactions Sold ...	0 1 0	Subscriptions in arrear and not paid ...	0 7 6
		Balance due Society ...	25 12 3½
	<u>£38 5 4½</u>		<u>£38 5 4½</u>

"Audited and found correct."—(Signed) G. H. ROBE.

These reports having been cordially adopted, the Secretary and Treasurer were awarded votes of thanks for their honorary services.

The Election of Office-Bearers for the ensuing Session was next

proceeded with, when Dr Gilchrist was re-elected President, and, on the recommendation of the Committee, the number of Vice-Presidents was increased to five, and the following were elected, viz. :—Sheriff Hope, Messrs J. Gibson Starke, J. M'Andrew, J. Barbour, and W. M'Dowall.

Mr Rutherford having expressed his wish to resign the Secretaryship, proposed Mr J. Wilson to be his successor, which was unanimously agreed to. On the motion of Mr Neilson, a hearty vote of thanks was again awarded to Mr Rutherford for his valued services during the past two years. Mr R. Barbour was elected Assistant Secretary in the place of Mr S. Chrystie, resigned. Mr J. Lennox was re-elected Treasurer; and the following gentlemen members of Committee :—Messrs J. Rutherford, John Maxwell, J. Neilson, T. Watson, R. Chrystie, G. H. Robb, W. Adamson, J. Davidson, A. Innes, and J. C. M'Lean. Auditor—Mr W. Bailey.

The ordinary business of the meeting having been concluded, Dr Grant gave an interesting address on “Egypt: its Language, its People, and its Antiquities,” in which he lucidly traced the history of that country from the 18th Dynasty (1600 B.C.) to the Turkish Conquest in A.D. 1517, and the different races which peopled it during that period.

On the motion of the Chairman, Dr Grant was awarded a hearty vote of thanks for his address.

7th November, 1884.

Dr GILCHRIST, President, in the Chair. Thirty-five members present.

Donations.—The Secretary laid on the table the 13th Annual Report of the South London Microscopical and Natural History Society, from Mr P. Gray; thirteen pamphlets from Mr G. F. Black on the Spinning Gear of former times, a Cist with an Urn from Park Hill, the Earldom of Caithness, Stone Implements from Shetland, Sculptured Stones from Monifieth, the Caves near Dysart, a collection of Flint Implements found at Fourdoun, remains of the Red Deer, Bronze Weapons found at Killin, and others.

Exhibits.—The Chairman exhibited a patent electric apparatus used for lighting lamps, &c., and Mr Rutherford described the

mechanism and the principle on which it was constructed. Mr Rutherford exhibited two photographs of the supposed cup-markings on the two largest stones in the Holywood circle. Mr M. J. Stewart, M.P., sent for exhibition a dozen specimens of the natural grasses grown on his farm at Southwick. Two specimens of the common clover measured thirty-eight inches in length, and the common meadow grass over four feet, while the tall fescue grass—*F. elatior*—extended to the length of six and a half feet.

COMMUNICATIONS.

I. *Notes on the Druidical Circle at Holywood.*

By J. GILCHRIST, M.D., President.

Having been in the vicinity of Inverness for a few days during summer, I had an excellent opportunity of examining those so-called cup-markings, which are specially well-known in that district. Recently I revisited the Holywood circle along with three gentlemen, two from Inverness — Dr Aitken, medical superintendent, and Mr Ross, architect — both familiar with these interesting relics of a people unknown, dwellers in a pre-historic age. Dr Grant-Bey, from Cairo, was also with us. The object of the visit was, if possible, to determine whether the so-called cup-markings on the Holywood stones were natural or artificial. They are found on two of the eleven stones still standing—viz., the one next the entrance gate from the west, and the fifth from the gate looking east. A careful examination of all the stones was made, but especially of the two latter, when it was concluded that the markings in both were natural. With this judgment I am disposed to agree as regards the fifth from the gate; but I am more dubious with regard to the first, and would rather leave it to be settled by one having authority. I believe Dr Dickson, late of Dumfries, and one of the founders of this Society, was the first to notice these markings, and read a paper on them a few years ago. They were visited by the late Professor Simpson, and quite recently by the Rev. Mr Lukis, the latter in the interest of the London Antiquarian Society. I may add that I re-examined the stones geologically. They are all silurian—that is, the rock which constitutes the hilly ridge on each side of the Nith valley—except one; that one is a so-called porphyry. Again, of the whole number, including the porphyry, four are boulders—that is, masses which have been

brought from a distance, rounded and polished by water and ice. These might have been obtained at or near the spot where they stand, but the seven others have been detached from the living rock by some ancient quarrying process. The nearest point where such rock could be obtained is the hills in the vicinity of Irongray Church. An increasing interest attaches to these curious cup-markings, as it is now ascertained that they are not confined to the north of Scotland, nor even to Britain, but are to be found all over the world. Their object and use is yet unascertained.

II. *Notes on the Ancient Bronze Implements and Weapons in the National Museum of Antiquities in Edinburgh.*

By Mr G. F. BLACK.

In this paper the writer gave a detailed description of a few typical forms of ancient bronze implements, &c., and the only local specimen referred to was a bronze knife-dagger, found near Glenluce by the Rev. G. Wilson. This specimen, Mr Black says, measures 3 inches by $1\frac{1}{4}$ at the butt. The point is broken, and the tang is a good deal wasted, but still bears the mark of the heft. The blade is two-edged, and slightly bevelled at the edges. It is the only one not actually found in connection with an interment; but as fragments of urns were found in the sand near it, there can be no doubt that it was connected with a burial.

III. *Notes on Local Ornithology.* By Mr W. HASTINGS.

As far as my observation has gone, this last season has not been very productive of much that can properly be called rare in the bird line, although I have had a number of curiosities in their way. In the month of December I had a fine specimen of a young barn owl—*Aluco Flammeus*—brought me. It was covered with beautiful white down, a very unusual time for the barn owl to have its nest; and at the time I received it, it would not be above three weeks old. In the beginning of May this year, I received a nice specimen of a white crow, and a few days later I got a specimen of a blue one, both curious. I have before had specimens of the white, but never of the blue; of course, they were both young birds. About the beginning of last month I received a specimen of the snow-bunting—*Plectrophanes Nivalis* (L.)—which was much earlier than I had ever seen them before.

They do not usually leave their breeding ground in the far north until they are compelled to do so by stress of weather. I lately received a specimen of the shoveller duck—*Spatula Clypeata*—which is by no means common in this district. The male bird of the shoveller is very beautiful. I have thought it strange that all the specimens I have had killed in the district have been females. About a month ago, I had a barndoor fowl brought me which had every appearance of a good-sized domestic cock in full plumage, with large spurs—as large, indeed, as is commonly seen upon a large game cock. The lady that brought it assured me that it was a hen, and a good layer of eggs until it assumed the male dress, when it stopped laying. I have seen many instances of the hen taking the plumage of the cock, both among pheasants and black game; but never before one that came so completely up to the mark as this one. Last week, I had a fine specimen sent me of a pure white partridge. I have before had specimens of the partridge of a dun colour, but never one anything like so white as this one. At the same time I received a fine specimen of the grey or silver plover—*Squatarola helvetica*—which seems to be scarce in this district, as it is the second one I have ever had in all my time. It is much about the same size as the golden plover, but differs in having a very small hind toe, which in the golden is altogether wanting. In the spring it assumes quite a different dress from what it has in winter, but it is a very handsome bird in whatever dress it may appear. This morning I had a fine male blackbird brought me, with a pure white head and neck. I have had specimens mottled all over, black and white, also with white head and tail—all the rest black. Last month I had a good specimen sent me of the marten cat, the only one I have ever had from this district. It is somewhat longer and more slender than the pole cat, and has not the offensive smell of the latter. The pole cat is now extinct in this quarter, the trapping of rabbits, upon which it naturally preys, having been the means of killing it out, as it got into traps that were not intended for it. The marten cat is not uncommon in the pine forests of the north, but this is the only one I have ever had in the flesh. There seems to be no end of hawks, owls, and squirrels, which are coming in more plentiful than ever.

IV. *Remarks on the recent Additions to the Flora of Dumfriesshire and Galloway.* By Mr F. R. COLES. (Abstract.)

This paper dealt with such records of new stations and of new species as were strictly additional to those given in the "Flora" compiled by Mr M'Andrew in 1882.

Approximately, 120 new stations for plants of such uncommon occurrence as—*Ligusticum scoticum*, *Valeriana dioica*, *Galium cruciatum*, *Campanula latifolia*, *Pyrola minor* and *P. secunda*, *Scrophularia Balbisii*, *Orobanche major*, *Lycopus Europæus*, *Utricularia intermedia* and *U. minor*, *Epipactis latifolia*, *Listera cordata*, *Typha latifolia*, and *Cladium mariscus* were recorded.

The following list comprises all the authentic new species:—Under *Ranunculus aquatilis*, which, in the Stewartry, at anyrate, is a frequent inhabitant of slow streams, ponds, lochs, and marshes, we have *R. peltatus* var. *truncatus* and var. *floribundus*; *R. diversifolius* var. *Godronii*, *R. Drouetti*, *R. trichophyllus*, and the variety of *R. peltatus* known as *fissifolius*.

With the addition of *Cochlearia anglica* near Creetown; *C. danica* at Colvend; the vars. *littoralis* and *alpina* in Borgue and Shinnel Burn districts respectively, the entire group of the Scurvy grasses is represented.

Among *Violaceæ*, the substitution of the *V. sylvatica* (Fries.) as the correct name of the plant recorded as *canina*, and generally so-called, led to the establishment of its sub-species, *flavicornis* (Forst.) and *Riviniana*, which, though a real gain of two new plants, set us a-hunting for the true Linnæan *V. canina*. Mr Coles was fortunate enough to find a few specimens of this much rarer species on the banks of the Dee below Threave. *Polygala depressa* is frequent on the coast of Kirkcudbright.

Of *Caryophyllaceous* plants, there were only two to notice—*Cerastium semidecandrum*, found by Rev. J. Fraser in Colvend, and the rare annual form *pentandrum* of *C. triviale*, found by Mr Coles at Ravenshall. A very interesting discovery was made on an excursion by Messrs M'Andrew and Coles among the Carsphairn hills, where, in a mossy old ditch, some 1800 or 1900 feet high, specimens of the var. *integrifolia* of *Saxifraga stellaris* were collected, a form hitherto known only on Ben Wyvis.

Of the genus *Callitriche*, we now had *C. platycarpa* (Kütz.), *stagnalis* (Scop.), *hamulata* (Kütz.), and *autumnalis*, L. in Kirk-

endbrightshire. *Epilobium obscurum* (Schrib.), *Filago germanica*, *Centaurea nigra* var. *radians* are all additional.

Of *Hieracia*, *H. corymbosum* and *H. tridentatum* are observed in plenty in the Kenmure district by Mr M'Andrew; and a form supposed by Prof. Babington to be *H. vulgatum* was collected by Messrs M'Andrew and Coles on lofty rocks in the Carsphairn hills in July of this year. Many other species in this difficult genus should be found in Dumfriesshire.

A curiously dwarf and broad-leaved Centaury, noticed by Messrs Robert Watson and Coles on the Borness shore, proves to be the var. *B. capitata* of *E. centaurium*; it is deceptively like the *E. latifolia*.

Linaria minor, near Lochmaben Station (F. W. Grierson); *Veronica montana*, L., in great abundance in St. Mary's Isle (R. Watson); forms of *Mentha officinalis* (under *M. piperita*); and what may prove a transitional form between *M. hirsuta* and *M. pubescens* were noted this season by Mr Coles, who had also *Rumex conglomeratus*, and the following Pondweeds to report from his own district:—*P. mucronatus*, Schrad., in Carlingwark Loch; *P. Zizii*, M. et K., in the Tarff, where also *P. lucens* var. *acuminatus* and *P. prelongus* luxuriate; *P. pusillus* var. *tenuissima*, in great quantities in a mill dam in Kelton. With *P. pectinatus* and *P. lucens*, collected by Gray many years ago, our total of Pondweeds reaches to 15.

A notable discovery by Mr Coles was made in regard to *Allium carinatum*, L., which much-discussed species he found in August this year growing vigorously, and with every appearance of its being native, on the shrub-entangled shingle of what is known as the shore of "the Lake" below Kirkeudbright. After careful scrutiny, in conjunction with Mr Robert Watson, Rector of the Kirkeudbright Academy, of the locality, and a detailed correspondence with Mr Ar. Bennett, F.L.S., Croydon, weight of opinion seemed to lie on the side of the *Allium* being very probably indigenous in this place (and equally so in the vicinity of Closeburn, Dumfriesshire, where Mr Watson had known the plant to exist for three years.) This was found to have been planted by Dr Grierson.

Juncus obtusiflorus, Ehrh., of which the only record was so far back as 1837-44, is found by M'Andrew in a new habitat in Colvend, who also confirms the station for *Carex aquatilis* var. *Watsoni*, Syme.

Plants, interesting as the sole representatives of their genus in Britain, or on account of some special local reason, have been now discovered as follows:—*Subularia aquatica* (F. R. Coles), in shallow reaches of the Dee below Threave; *Teesdalia nudicaulis*, in the Holm Glen by M'Andrew and at Locharbriggs by Wilson; *Alsine verna*, mentioned in the Flora as lost since 1864, was re-discovered in Colvend on an excursion of the Society in 1882; *Orobanche rubra* (M'Andrew), in Colvend; *Centunculus minimus* (Coles), in Kelton; *Malaxis paludosa* (M'Andrew), in Colvend; and the rare and beautiful grass, *Calamagrostis lanceolata*, was found undoubtedly native by M'Andrew this year (1884) for the first time for Scotland; "its most northern station known for certain," says Mr Bennett, "being Cheviotland in N. Northumberland."

The *Characeæ*—not included in the Flora at all—prove to be fairly numerous. In two seasons Mr Coles had found the following species:—*Chara fragilis*, Desv., near, if not quite, the typical plant, rarely, in clear pools of the Glengapp water, Tongland; the variety *barbata* is the commonest form, being frequent in small streams and sheep drains on the moors in the middle of Kirkcudbright; var. *brachy-phylla*, as yet noticed in only one locality, close to the sea on Muckle Ross cliffs; var. *capillacea*, local, but very luxuriant in a mill dam in Kelton; the var. *delicatula* is credited by Messrs Groves to Mr M'Andrew—locality unknown.

Chara polyacantha—This strange and very uncommon plant Mr Coles found in fair quantity in a turbid peaty loch on Culdoch Moor, Kirkcudbright. *Nitella opaca*, with one or two subspecies, is fairly common in ponds and ditches, while a very beautiful and characteristic form of *N. translucens* grows in Meiklewood Loch, Tongland.

Among Filices, Mr Coles records several new stations for *Hymenophyllum Wilsoni*; Mr Wilson for *Cystopteris fragilis*; Mr M'Andrew finds *Lastrea spinulosa* in the Glenkens woods, and a very striking variety of the common bracken, having the points of each pinna attenuated and then forked, sometimes quinquefidly; grows in Compstone Wood (Coles, October, 1884), Kirkcudbright.

Looking at the Flora as a whole, it was pleasant to note so few actual errors, but still there were some plants admitted whose identity, habitat, and distribution were all somewhat lost in

uncertainty. It might be as well in a second edition to omit such; meanwhile there was no doubt that the sentence of excision should be passed upon the following:—*Viola Hirta*, *Elatine Hexandra*, *Trigonella ornithopodioides*, *Melampyrum sylvaticum*, *Lysimachia nummularia*, *Tofieldia palustris*, *Juncus Balticus*, *J. castaneus*, and *Elymus arenarius*: while for such species as *Alchimella Alpina*, *Myriophyllum alterniflorum*, *Arctostaphylos uva-Ursi*, *Paris quadrifolia* (at Dundrennan), and *Allium scorodoprasum*, later authentic records are much required.

Much work still lay in the genera *Rubus*, *Rosa*, *Hieracium*, *Mentha*, *Salix*, and *Chara*; and the *desideratum* of keen observers, especially in the hillier parts of Dumfriesshire, was still felt.

In conclusion, the writer urged all those interested in Botany to verify all reports of species, and to forward specimens, with particulars, at once to Mr M'Andrew, whose responsibility it was their duty to lighten as much as possible.

5th December, 1884.

Mr J. GIBSON STARKE, Vice-President, in the Chair. Thirty members present.

New Members.—Mrs Barbour, St. Christopher's; Mr W. T. Craig, solicitor, Dumfries.

Donations.—The Secretary laid on the table Vol. I., Part IV., of the Proceedings of the Perthshire Society of Natural Science; Vol. III. of the Transactions of the Essex Field Club, as donations from the respective Societies; also a Roman Copper Coin found at Liverpool, and presented by Mr Henderson of that city.

Exhibits.—Dr Gilchrist exhibited sixteen specimens of Norwegian Minerals, and Mr J. Shaw a fine specimen of Opal from the Giant's Causeway.

COMMUNICATIONS.

I. *Ancient Modes of Sepulture.*

By Mr J. GIBSON STARKE, Vice-President.

II. *Notes on the Flora of Upper Nithsdale, and additions to the Flora of Dumfriesshire.* By A. DAVIDSON, M.B.

When at Thornhill in the summer of 1883 Mr James Fingland and I, in collecting botanical specimens for our herbarium, made

a systematic exploration of the district in our neighbourhood. This year, though my migration to Sanquhar severed the partnership so mutually beneficial, Mr Fingland has continued and extended his exploration of the district, so as to include the parts surrounding Dumfries; while I have in my leisure hours prospected the Sanquhar and Kirkconnel parishes; and the combined work has resulted in the discovery of about 200 new localities for these plants already recognised denizens of the county, and 46 new species or varieties. The main field of investigation may roughly be said to include the whole valley of the Nith from Dalswinton to Kirkconnel. Time will not allow my treating this subject in the complete manner it ought to be done, so I will confine myself to the positive aspect of the question; and, taking the local Flora as my guide, I will first of all enumerate some of the new localities for the rarer species, with short references to those plants common elsewhere perhaps, but rare in Nithsdale; and in the second place, consider those new to Dumfriesshire.

Naturally the *Ranunculi* is first of all to be considered. *Ranunculus Flammula*, sub-species *reptans*, recorded as growing at Lochmaben, has been mistaken for var. *pseudo-reptans*, a very much more common plant; though the only other locality where I have found perfect specimens is near Garrich, Thornhill. *R. hirsutus* was found at Ruthwell by Mr Fingland. I show here a specimen of the yellow lily from the Black Loch, Sanquhar, and I think there is no doubt it is *Nuphar intermedia*, not *N. pumila* Sm. The Celandine, *Chelidonium majus*, as an escape, is well established in a few places at Thornhill and Carronbridge. For *Corydalis claviculata*, one new locality, Cleuchhouse Linn, Keir, has been added; and Ruthwell locality has been confirmed by J. Fingland. *Arabis thaliana*, *Barbarea vulgaris*, and *Cardamine amara* may be considered fairly common, the latter particularly so. On the rocks in the Dalveen Pass we found *Arabis hirsuta* in a good few places. In Loch Mailing, Auld-girth, and Lochmaben the marsh rocket, *Nasturtium palustre*, is not unfrequent. The common scurvy grass, *Cochlearia officinalis*, rare as an inland plant, grows in fair abundance in Camplecleugh, Water of Æ, and Euchar. Of the *Caryophylleæ*, three only require to be noticed—*Lychnis vespertina*, which is not uncommon in the Thornhill district, and the variety, *puberula* of *Silene inflata*, found in a wood near Thornhill and near Cample. In a field near Sanquhar, I this season gathered the only specimens of

Githago segetum I have yet seen. The variety *Riviniiana* of the wood violet is very common, but *Viola canina* has not been found.

The wood stitchwort *Stellaria nemorum*, generally a somewhat rare plant, grows plentifully in the woods from Auldgirth to Drumlanrig; and the rare *Sagina nodosa* favours only the Pass of Dalveen.

Geranium sylvaticum, though generally twice as rare as *G. pratense*, is in all Nithsdale very common; while *G. pratense* is comparatively rare. The shining crane's-bill, *G. lucidum*, given in the Flora as an escape, grows in Clauchrie Glen and Cample, on rocky, not easily accessible, spots, and may be considered undoubtedly indigenous; in some other places it is, however, not so.

The pretty *Genista tinctoria* we found in two localities only, Scaur Water and Campleslacks, and the *Genista anglica* only at the New Loch, Thornhill. *Ulex Gallii*, Mr Fingland observed this season near the Brow Well, Dumfries. *Vicia Orobus*, recorded in the Flora Scotica as growing near Sanquhar, has been found abundant in Euchan Glen; and in the valley of the Crawick, on the opposite side of the Nith, a large patch of the beautifully pencilled vetch *V. sylvatica* was found. For *Rubus Chamemorus*, *R. saxatilis*, and *Saxifraga hypnoides* many new localities could be given. The pretty starry Saxifrage, *Saxifraga stellaris*, grows in bright profusion on the Caple at Queensberry; in a few places in Clauchrie Glen *S. granulata* was discovered. *Chrysosplenium alternifolium* and *Sedum villosum* are both more common than might be supposed. Among the epilobes *E. angustifolium* as an escape grows in abundance near Sanquhar, and in a few places on the hills of Dalveen and Cample. *E. hirsutum* is, however, rare, being only found in two places near Thornhill. Friars' Carse marks the northern limit of a good few plants, such as *Lythrum Salicaria*, *Cicuta virosa*, *Lysimachia vulgaris*, *Scutellaria galericulata*, and *Solanum dulcamara*. For *Helosciadium inundatum* and *Enanthe crocata* a good few new habitats have been allotted, the latter being in many parts somewhat common, while *Aethusa Cynapium* and *Daucus Carota* can only claim two localities each north of Auldgirth. The common hemlock Mr Fingland found this year at Carlaverock and Lochmaben, but was in neither place abundant. In the Drumlanrig and Sanquhar woods the *Viburnum Opulus* is frequently to be

met with, and in two places the rare *Sambucus Ebulus* finds a quiet retreat. On the banks of the Nith *Galium cruciatum* and *G. boreale* are frequently met with, the latter in great abundance. In Euchar Glen the melancholy plume thistle, *C. heterophyllus*, is very common; while in Crawick, its only other station, it is rather scarce. *Bidens cernua* favours only the common loch, Thornhill. The yellow Leopard's bane, *Doronicum Pardalianches*, grows in abundance at Nith Linns, and also, although less so, at Morton Mill. *Crepis paludosa* has been found in Nith Linns and Camplecleugh, the specimen from the latter place being *unicephalous*, a variety Mr A. Bennett has not hitherto met with. *Campanula latifolia*, *Pyrola minor*, and *Symphytum tuberosum* is fairly well distributed; the latter, I think, is probably indigenous in the Nith below Holmhill. *Symphytum officinale* is somewhat common and general. At Sanquhar Castle a few plants of *Anchusa sempervirens* still flourish. Mr Fingland has reported the presence of *Erythraea littoralis* near the Brow Well as probably a new species for Dumfries. The wood betony, *Stachys Betonica*, though abundant on Euchar and the Nith as far as Ellick Bridge, has not been discovered elsewhere. *Galeopsis versicolor* is not uncommon in Moniaive, Sanquhar, and Thornhill parishes. *Lamium amplexicaule* has only been found in one locality, near Sanquhar. On the railway embankment near Birscar a few plants of *Verbascum Thapsus* were seen, and on the broom all around Auldgirth and Glenmidge the *Orobancha major* may be considered common.

Polygonatum multiflorum no longer grows at Tibbers Castle, but a few specimens still maintain their ground in the wood near Thornhill. Whether the *Sparganium*, simply found in a few places near Thornhill, is new to Dumfries cannot be decided by reference to the local Flora. At Ronaldstoun and Glenmidge, Auldgirth, and a few other places, *Potamogeton rufescens* is not uncommon.

Scirpus sylvaticus is very common in many places on the Nith and *S. acicularis* was found this season at the Townfoot Loch by Mr Fingland. The local Flora is, I find, no true record of the Dumfriesshire Carices. *Carex dioca*, *muricata*, *curta*, *hirta*, *remota*, *lævigata*, and *sylvatica* may all be considered common. For *C. paniculata* two new habitats are recorded. *C. vesicaria* has been found in only one place, at Kirkbog, Thornhill. Loch Urr is a new habitat for *C. pauciflora*. *C. teretiuscula*, given as

occurring at Thornhill, has evidently been mistaken for *muricata*, which differs somewhat from the usual type standing somewhat intermediate between *muricata* and *pseudo-divulsa*.

A few lines will dispense with the grasses. *Milium effusum* I found this season in Crawick Glen; and in two new localities, Nith Linns and on the banks of the Nith above Ellicock Bridge, I have gathered *Poa nemoralis*. *Festuca Myurus* is pretty common, and must have by mistake been noted in the Flora as rare.

For the wall rue and black maiden-hair ferns a few new habitats have been noticed. Of the hart's tongue a scattered remnant is still to be found on Cample, Nith, Aird's Linn, and in Dalveen Pass. The brittle bladder fern may be found in almost all the sub-alpine glens, and in Carron Water is most abundant. *Ophioglossum vulgatum*, the adder's tongue fern, has been found near Moniaive. The green spleenwort is almost extirpated from Euchan Glen, and will probably soon be extinct. Of the club mosses *Lycopodium clavatum*, *alpinum*, and *Selago* are represented.

The critical genera I have wittingly passed over, as I wish to refer more particularly to these species apparently so little studied. The *Batrachian ranunculi* have been examined by Mr Fingland, and the following we are enabled to record:—*Ranunculus peltatus*, var. *truncatus* and *floribundus*; *R. diversifolius*, var. *Godronii*; *R. Bandotii*, var. *confusus*, all new to Dumfriesshire.

My investigation of the roses has led to some important additions. *Rosa spinosissima*, rare as an inland plant, I found at Ellicock Bridge on the Nith. A glandular variety of *R. tomentosa* is very common at Sanquhar. The following are all new additions:—*Rosa mollissima* varieties, *mollis* and *cærulea*; and *R. canina*, six varieties, viz.—*Lutetiana*, *dumalis*, *Reuteri*, *subcristata*, *Borreri*, and *arvatica*. I may here record my indebtedness to Mr Arthur Bennett, without whose kind and unstinted assistance I would have been unable to define these varieties. I am also much indebted for his help with many other species. Three new Callitriche have also been added, viz.—*hamulata*, *platycarpa*, and *stagnalis*.

Next come the willows. Of *Salex pentandra* a few plants have been found on the Nith near Sanquhar, and in Ellicock, Drumlaurig and Kirkeconnel woods; and strange to say all were male specimens. It would be interesting to observe if the Gallo-

way plants, or those found in other parts of the country, present this peculiarity. *S. Caprea*, *cinerea*, *aurita*, and *purpurea* are common. The following are additions:—*S. phyllicifolia*, var. *Davalliana* and *tenuior*; *S. nigricans*; *S. triandra* and *Salix cinerea*, var. *aquatica*. Two new carices—*C. pendula* and *C. aquatilis*, var. *Watsoni*—fall to be added.

I gathered four different brambles, and after vainly endeavouring to decipher them I sent them to Professor Babington, who found some difficulty in naming them, as the specimens sent were not very carefully prepared. The names accorded them he did not wish to be considered perfectly correct; nevertheless I think it better to give them. They are—*Rubus Koehleri*, *plicatus ramosus*, and *carpinifolius*.

So far, although close attention has been paid to the *Hieracia* (Hawkweeds), I have been unable to discover any other than the two commonest—*H. vulgatum*, var. *nemorosum*, and *H. murorum*—and I am somewhat surprised that this part of the shire can show no other varieties in an order where varieties are so numerous. *Nitella Opaca* and *N. translucens* are the only representatives of the Characeæ found in the district.

It now remains to briefly notice the few remaining plants not hitherto, or only doubtfully, recorded as natives of Dumfriesshire. First on the list comes *Thalictrum majus*, var. *flexuosum*, found in a few places on the Nith above Drumlanrig. *Dianthus Armeria*, hitherto unknown in the south west of Scotland, I discovered near Auldgirth, in a locality that almost excludes any chance of it being an escape. *Potentilla procumbens* is not uncommonly met with at and south of Auldgirth; while *P. reptans* has not been met with. In Cleuchhouse Linn, Keir, and on the Nith near Sanquhar, a few specimens of *Geum intermedium* have been found. *Hypericum hirsutum*, previously only reported from Kirkcudbright, appears in many places on the Nith. *Ornithopus perpusillus* and *Malva moschata* also claim to be considered natives. The varieties, *palustre* of *Taraxacum officinale*, *Leontodon hirtus*, and *Leontodon autumnalis* (var. *prutensis*), fall to be added to the list of compositæ. *Galium Mollugo* I gathered near Sanquhar; and on the Nith near Thornhill specimens of *Dipsacus sylvestris* and *Polygonum Bistorta* were found. *Polygonum amphibium* and *Peplis portula* may also be noted as probable additions. The only new *potamogeton* is *P. pusillus*, var. *tenuissimus*, which Mr Fingland found growing adundantly

in Townfoot Loch, Thornhill. Three new grasses — *Avena flavescens*, *Festuca pratensis* (variety *loliacea*), and *Glyceria Aquatica*—close the list of flowering plants. Last and rarest of all I have to record is *Equisetum pratense*, abundant in Crawick Glen and on the Nith near Elliock.

III. *A Visit to the Giant's Causeway.* By Mr J. SHAW.

IV. *Dates of First Blossoming of Plants in Tynron.*

By Mr J. SHAW.

In submitting a list of plants first noticed in blossom in months of April, May, June, and July, Mr Shaw remarked that April, 1884, showed flowers about a week earlier than April, 1883. Cold winds in March, 1883, blighted an early blossom, and threw vegetation back. In May, 1884, the number of flowering plants observed was 70. This was a no greater number than that observed in May, 1883. May, 1884, got a better start, but did not keep up in the race. With some difficulty it waved a hawthorn blossom at us before parting, which was so far beyond what its sister of 1883 had done. June is undoubtedly the flower lovers' favourite month. The drought and barren winds of last June filled the farmers' minds with gloomy fears. Vegetation halted. Our list presents 87 as against 113 of the preceding June. The Fox-glove was not seen with us this year in June at all. Many of the Orchis species lagged a week or fourteen days behind. Just as in 1883 plants that are wont to appear by the middle or end of May were crushed forward into June, so in 1884 many June blossoms were held over to July. The wayside roses, which appeared in 1883 in the middle of June, began to unfold this year a week later. In July the number of plants in both years in blossom was about 100. Vegetation quickened rapidly with the fine weather of this month. Still, by comparison, blossoms were behind their time. The heather, which began to bloom with the opening days of the month in 1883, was only observed for the first time about the middle of July, 1884, to the distress of those bee-keepers who wished to profit by its flowers. Still, by the end of the month, July, 1884, had well-nigh got abreast of July, 1883. The blue bells waved in the same week in both; and some of the late flowering grapes, and several hawkweeds, are registered as appearing with only a few days difference in each.

2nd January, 1885.

Dr GILCHRIST, President, in the Chair. 28 members present.

Donation.—The Transactions of the Berwickshire Natural History Club were laid on the table as a donation from that Society.

Exhibits.—Mr Starke, V.P., exhibited a copper-plate engraving of the Old Bridge of Dumfries. Mr Rutherford exhibited two cases of Caddis-flies, lent by Mr R. Service to illustrate Mr King's paper.

COMMUNICATIONS.

I. *Notes on some Trichoptera from the Stewartry.*

By Mr J. J. KING (Corresponding Member).

On March 6th, 1880, a paper entitled "Notes on a Collection of Trichoptera from the Stewartry," by Mr F. G. Binnie, was read before your Society. At various times since then Mr Service has forwarded to me some small collections of caddis-flies, among which I find 17 species that have not been recorded from the Stewartry; indeed, one species is new to the Fauna of Britain. These, along with the species recorded by Mr Binnie, bring up the number to 47 species in all, which is somewhat less than one-third of the species recorded from Britain. No doubt if a little more attention were paid to this much-neglected and interesting group of insects, the number might be very much increased, as I notice the absence of many common species, such as *Limnophilus centralis*, *L. vittatus*, *Micopterna lateralis*, &c., that must occur in the Stewartry.

I might here ask the entomologists of the Society to collect any caddis-flies that they may come across during the incoming summer; by so doing they will materially assist Mr Morton and myself in a list of the caddis-flies of Scotland which we are about to publish in the *Scottish Naturalist*. Caddis-flies require no further attention in preparing them than do the Lepidoptera. In the following list the species new to the Stewartry are indicated by an asterisk. The arrangement followed is that of Mr McLachlan in his "Revised List of British Trichoptera," published in the Transactions of the Entomological Society of London, 1882:—

Phryganeidae.—**Phryganea grandis*, L. *Phryganea varia*, F., common—Maxwelltown Loch, &c.

Limnophilidæ. — *Colpotaulius incisus*, Curt. — Dalscairth. *Glyphotælius pellucidus*, Retz.—Dalscairth, Portland. *Limnophilus marmoratus*, Curt.—common—Portland. *Limnophilus rhombicus*, L.—Maxwelltown Loch. **Limnophilus flavicornis*, F.—Maxwelltown Loch. *Limnophilus xanthodes*, M'L.—Maxwelltown Loch (some of the varieties of this species are very handsome). *Limnophilus lunatus*, Curt.—common. **Limnophilus affinis*, Curt. **Limnophilus extricatus*, M'L.—very common at Dalscairth and Maxwelltown Loch. *Limnophilus luridus*, Curt.—Dalscairth. **Limnophilus sparsus*, Curt.—Portland. **Limnophilus fuscicornis*, Ramb. (one specimen was taken of this somewhat scarce species). *Anabolia nervosa*, Curt.—Dalscairth. *Stenophylax stellatus*, Curt.—very common—Maxwelltown Loch and Dalscairth. **Micropterna sequax*, M'L. (a few specimens of this species were obtained). **Mesophlax impunctatus*, M'L. (this interesting addition to the British Fauna was taken within the Stewartry; for details see "Entomologists' Monthly Magazine," XX. pp. 19-20, indicated as *M. aspersus*, var.) *Halesus radiatus*, Curt.—common. **Halesus digitatus*, Schrank.

Sericostomatidæ.—*Silo palipes*, F.—Dalscairth. *Lepidostoma hirtum*, F.—Maxwelltown Loch.

Leptoceridæ.—**Leptocerus aterrimus*, Steph.; common—Maxwelltown Loch and Dalscairth. **Leptocerus cinereus*, Curt.—Maxwelltown Loch and Mabie. **Leptocerus commutatus*, M'L.—Dalscairth (a very good character by which the female of the species may be separated from that of *albifrons* is the snow-white space towards the tip of the antennæ, which is very conspicuous; this white space is entirely wanting in the antennæ of *L. albifrons*).

Hydropsychidæ.—**Hydropsyche pellucidula*, Curt.—Dalscairth. **Philopotamus montanus*, Donov.—Mabie. **Plectrocnemia conspersa*, Curt. *Polycentropus flavomaculatus*, Pict.—Drungans. **Tinodes Wæneri*, L.—Dalscairth.

Rhyacophilidæ.—*Glossosoma Boltoni*, Curt.—Mabie. **Glossosoma vernale*, Pict.—Dalscairth.

II. Notes on the Town's Common Mills and their History.

By JAMES BARBOUR, Vice-President.

The Mills belonging to the town of Dumfries, situated on the Maxwelltown side of the river, a little below the Old Bridge, are

sombre and unpicturesque buildings, but their principal accessory, the mill-dam, adds much to the beauty of the river. It forms a broad waterfall, and gives depth and a lake-like appearance to a reach of the river, which bends round the north-west portion of the town, and extends as far as Lincluden, reflecting at once on its smooth surface the ruins of that ancient Church and Devorgilla's venerable bridge.

These Mills occupy the site of older buildings of the same kind, which were erected there in the year 1705, when Matthew Frew, according to the terms of the contract between the parties, undertook "to construct and build ane good and sufficient complete and well-going water-miln, for grinding of malt, meal, and flour, or anie grain whatsoever, with dams, wearis, sluices, watergangs, taledams, and hail othir pertinents." The Caul is specified to extend "from that part of the rock on the Galloway or Troqueer side, opposite to Baillie Fingusse's barn, in the Whitesandbeds, up to the Dumfries side of the Nith opposite to the entry or passage to the Water of Nith at the foot of ye Freesvennell, or opposite ye back of the house pertaining to James Boyd, merchant;" and it is designed to be constructed of wood: "Which Caal or Dam is to be made of staicks of red oak, fixed into the rock through the Water of Nyth, at two foot distance one from another, or thairby, and holes to be digged into the rock fit for beating down and fixing each stake, or stoup thairin; and which staickes are to be supported by stoupis of oak fastened into ane oaken soale, throw the Water of Nith, at the back of the said staiks or stoups; and the said staiks or stoups are to be lyned with good full firrdales, close plain-seamed on the upper syde and nailed to ye said stoupes." The water-gang is to be 160 feet in length. The Mill is to be built upon "that rock opposite to the entry into Provost Irving's yeard at the head of the Cunningham's lands pertaining to the Toun of Dumfries." The Tail-dam is to be "1200 foot in length or thairby, down from the said miln to that rock in the rack opposite the heid of ye Willies." Frew binds himself to begin the work the 8th of April, 1705; to end the same at Martinmas next to come, under penalty of 1000 merks Scots; and to uphold the Mill, Dam, &c., seven years. The total contract price is 3000 merks Scots, payable by periodical instalments of 360 merks each. The contractor comes in the Town's will for any further payment, over and above the stipulated price of 3000 merks. He

is to have liberty to dig and win stones for the said work out of the Town's quarries not already opened. His needful travelling expenses during seven years' upholding to be satisfied by the Town.

Some of the entries in the Town's accounts further indicate the quality of the buildings, and also serve to illustrate the current rate of wages at the time :—

Novr. 1706.			
Payd for 18 burdings of whins (for Caul) at 8d ye burden	£0	12	0
Alexr. Glen for 8 draughts of stones for the Call	...	1	12 0
John Anderson for 7 draughts	...	1	8 0
John Neilson for 7 draughts	...	1	8 0
Gawaine Carlile for 7 draughts	...	1	8 0
Novr. 20.			
Arther Grahme for 3½ days at the New Mills, by Bailey Ewert's order, at 7s per day	...	1	4 6
William Car 4 days at the New Dam	...	1	8 0
John Duf 3 days	...	1	1 0
John Neilson and John Anderson for 2 cairts from Carlaverock with wood for a wheel	...	4	0 0
To Bailey Ewart, be paid for timber for a wheel	...	5	0 0
To Bailey Corbet given Wm. Mean in earnest when they agreed for bigging of a kill	..	0	14 6
Nov. 27.			
For 5 Threves & ½ of Thak to ye Mill, be Bailey Barkles order	...	0	16 0
To a Theaker for putin on the Thak of ditto	...	0	7 6
Febv. 25, 1707.			
Hew Roddick and John Turnor for easting and leading ye turffs and rigging the New Miln, per Coun: order	12	0	0
March 1.			
Thomas Macjore for whins brought to ye Town's Caul by him, &c.	...	2	8 0
All Scots money.			

Altogether the picture presented of this Mill, with its walls built of rough stones, which had been dug out of the site of the existing Kilns, and its thatched roof ridged with turf, exhibit Frew's "model" as an unambitious one; and the Caul made of wood must have served its purpose very imperfectly if we are to judge by the quantities of whins and stones with which it had to be supplemented.

The progress of the work undertaken by Frew was interrupted by a law plea. Shortly after its commencement, the proprietors of the upper fishings opposed the construction of the Caul, by presenting a bill of suspension in the Court of Session. The case was ultimately decided in the Town's favour, and the mill was completed in 1707, when it was let to a tenant, along with another water-mill belonging to the Town, situated in the Mill-hole.

In the year 1780 Frew's mill was destroyed by fire, and the existing buildings were erected on the same site the year following, under the direction of an eminent engineer, John Smeaton, designer of Eddystone Lighthouse and many other great works, whose life forms one of the most interesting and instructive of the biographies contained in "Smiles' Lives of Engineers." Smeaton was born at Ansthrope, near Leeds, in the year 1724, and he died in 1792. He had been consulted by the Magistrates of Dumfries on other matters beside the Mills. "One of the earliest subjects on which Mr Smeaton was consulted," says Mr Smiles, "was the opening up of river navigation. In 1760 he reported to the Magistrates of Dumfries as to the improvement of the Nith, but his advice—to form a navigable canal rather than deepen and straighten the river at a much greater cost—was not carried out for want of funds." The drawings for the mills furnished by Smeaton are among the Town's papers.

Before the erection of Frew's Mill, the Town possessed, on the Dumfries side of the river, a water-mill, situated in the Millhole; another water-mill, called the "Sandbed Mill of Dumfries;" and a horse-mill, the site of which is now occupied by part of the west side of the Brewery, at the head of Brewery Street.

We have no record regarding the erection of any of the three mills on the Dumfries side of the river, but there is evidence of the existence of buildings of this description in the Town at an early period. There is mention of "Adam the Miller" about the middle of the 12th century, when Richard, son of Robert, was arraigned for his murder in the Castle of Dumfries; and in 1307, the Castle being in the hands of the English, command is sent, on behalf of the King, to James de Dalilighe at Skymbernesse to provide wheat and barley, and have it ground at Dumfries.

Later we have reference to a mill-dam, in such terms as to indicate its locality. In a Charter, by the King, dated Dumfries, 10th October, 1510, confirming the Charter which William Cunninghame, Burgess of Dumfries, had previously granted to the Parish Church of Dumfries (St. Michael's) of certain houses and lands within the Burgh of Dumfries, mention is made of—
"8/ from the tenement of Shir Finlaii Makgilhauch, Chaplain;
4/ from the Orchard of the said Chaplain, hard by the mill-dam;
12/ from the tenement of the late John Steill, situated between the mildam and the Clerkhill."

Both the water-mills on the Dumfries side were such as would now be considered extremely primitive. They were small buildings, their roofs—in common probably with the greater part of the town at the time—covered with thatch; and as early as 1661 the walls of the Sandbed Mill had become insecure. The Town's Minute Book, under date 10th November of that year, bears:—“Councill ordains the public Treasurer publicklye to cause theik the Towne Milns with strae, and to cause under-prop the wall of the Sandbed-mylne until the Spring.”

A little further information may be gleaned, as to the character of the old mills, from statements made, and evidence taken, in the dispute, already referred to, between the Fishery proprietors and the Magistrates. The former represent that the Sandbed Mill, in lieu of which the projected one was being built—“Is of so little use to the Town that she had not been, these eighteen or twenty years, agoing;” and that—“The Town did not require a new milne, they having both a horse-milne and a water-milne besides.” On the other hand, the Town Council say that—“Where they were building ane Damm or wall through the water of Nith to serve in ane milne which is also building, for grinding of malt to the inhabitants of the burgh, who are thirled thereto, through that part of the water of Nith belonging to the Town of Dumfries in Property and Superiority, above a stone-cast below a milne and wall and Damm which the Town had upon the same water, which still was sanded and broke with speats and torrents of the water,” and further that they “had not the use of any Horse Milne, nor has had this long time, and for their Water Milne she had [gone] about three months of the winter season or thereby, and they have not any going milne at present.” The Witnesses deponed that—“The Town of Dumfries had a milne dam dyke quite through the water of Nith to the Galloway side from the Sandbeds Milne, about 5 feet high above the ground, made up of stain and creills, without lime, but sometimes stopped with fog, and the water was never equal with the said dyke in the summer time except in a great speat.”

The Sandbed Mill disappeared long ago, but its situation is described in the Town's Titles as at the east end of, and hard upon, the Bridge of Dumfries, and as extending to Homer Maxwell's house, which stood below the Bridge.

Last year extensive remains of the east abutment of the Old Bridge were discovered underground, between Bridge Street and

Brewery Street, and it was found to be pierced by a culvert, evidently part of the lade or "watergang," for leading water to the Mill.

The structural connection thus found, linking together the Mill and the Old Bridge, suggests the theory that the two structures were built together by a common founder, and that, in accordance with ancient custom, the Mill was attached to the Monastery as well as the revenues of the Bridge; and the theory derives further support from the terms of the Town's Titles to the Mills.

A Minute of Council, of date 25th Feby., 1656, bears:—"Ordains to be put in their Town's box William, Lord Hereis, and Sir William Maxwellis Seisin in the Sandbed Mylne with the Laird of Gribtoun thereanent regestrat in the Bukes of Counsell to the burgh. Item, Robert M'Briar, his Disposition to Thomas M'Briar and his Spouse to the Burgh of the Mylnehole Mylne." The extract shows that the Millhole Mill was acquired by the Town from Thomas M'Briar; and with reference to the Sandbed Mill and the Town's rights generally, the Magistrates, in the dispute with the fishery proprietors about the erection of the Caul, produced their Titles, of which the following is an outline:—

"Ane Chartour made and granted be King James the Sixth in favors of the Provost, Baillies, Toun Councill, and Community of the Town of Dumfries, and their successors, of 'All and hail the fermis profits, &c., and others of the hail lands, tennendries, houses, biggings, orchyards, yeards, crofts, and others, fishings which pertained to the brethren of the said burgh commonly called Greyfriars. Together with the half of the customes imposed on the said burgh and others incumbent and deu and payable to the said brethren. Also, All and hail the lands, tenements, houses, biggings, annuities, fruits, profits, emoluments, given and mortified to the said brethren, pertaining or which should pertain to them within the paroch Church of the said burgh, as the said Charter, of the date the 4th day of January, 1591 years bears.

"Ane Instrument of Seasine of John Maxwell of Gribtone, bearing him to be infest in ane malt milne, situate on the river bank at the east end of the Bridge of Dumfries, with houses, milne, waters, water-gates, with sequels, astricted multures, and their pertinents, lying within the territory of the said burgh of

Dumfries, as the said Seisine of the 26th day of October, 1629 years bears.

“Ane Disposition made and granted be John Maxwell of Gribtoun, heritable proprietor of the Malt Milne and others therein specified, and Jean Richardson, his spouse, to and in favors the Provost, Baillies, Councill, and Community of the burgh of Dumfries, &c., All and hail the malt milne pertaining heritably to the said John Maxwell, bigged and constructed upon the Sandbeds at the east end of the bridge of Dumfries, with the milne houses, waters, water-gangs, damms, with the thirled and astricted multures, sucken sequels, and hail pertinents thereof whatsoever, &c., as the said Disposition, of the date the 25th day of October, 1630 years bears.”

There is another Deed among the Town's papers, which, so far as I am aware, has not been before referred to, and it supplies the link which directly connects the Mill and the Church. It is in Latin, and is endorsed in an old hand on the back—“William, Lord Hereis, instrument of Seasing the Sandbed Mill of Dumfries,” and dated 10th November, 1589. From this document we learn that Lord Herries acquired the Mill from the Rev. Thomas Maxwell, who was the last Vicar of Dumfries.

The following is a full outline of the text :—“Herbert Raining, one of the Bailies of the Burgh of Dumfries, as representing the Superiors of the burgh-lands—the Provost, Bailies, Council, &c., of Dumfries—grants Seisin to the Reverend Maister Thomas Maxwell, Vicar of Dumfries, and his heirs and assignees, All and whole the under written portion of the said foreshore, or river bank, which forms an integral portion of the common lands of the Burgh of Dumfries. The date of the Charter granted Maister Thomas being at Dumfries, 20th March, 1588, granting him Seisin of a portion of those burgh-lands, commonly known and described as the Over Sandbed, upon the water shore or bank of the river Nith there adjoining, &c., and hard upon the stone bridge of the same river, &c., extending longitudinally as far as the contiguous gable wall of the house, which has been built upon the same river-shore, or bank, and which is the property of Maister Homer Maxwell [Here the pertinents are described in terms similar to those before quoted from Sir John Maxwell's Disposition] in feu and heritage, the said Thomas to pay merks, usual money of Scotland, by equal portions, at two terms of the year, at the Feast of Pentecost and Martinmas, in name of feu-farme.

“ And the said Maister Thomas Maxwell, Vicar of Dumfries, for certain causes, &c., resigned all his rights into the hands of Herbert Raining, as the deputed representative of the Superiors—the Provost, &c., of the Burgh of Dumfries—in favour of and for a new Seisin to be granted to a noble and potent lord, William, Lord Hereis, and Dame Cathrine Kar, his Spouse, &c. In presence of Roger . . . Burgess of the said Burgh; Hugh Maxwell, son of John Maxwell in Logane; William Maxwell, brother of the said John; Herbert Hunter, servitor to the said Lord; John Maxwell and David M'Math, servitors to the said burgh, Witnesses, &c.

“ Herbert Cunynghame, of the diocese of Glasgow, Notary Public, and Writer and Notary in the Burgh of Dumfries.

“ Signed and confirmed by James Rig, also Notary Public.”

There is no Writ showing in what way the Vicar himself became possessed of a property of this peculiar description, but little doubt can be entertained that it would be as part of the income of the Vicarage, to which he had been presented by James VI., 1st July, 1579.

It appears then that the Sandbed Mill adjoined the east end of the Old Bridge, and was connected structurally with it in such a way as to show that the two buildings had been erected contemporaneously and together; that the Town derived their rights in the Mill from the King's Charter granting them the possessions of the Brethren of the Greyfriars (as they did the Bridge dues), and a Disposition in their favour by John Maxwell of Gribton, to whom the property descended heritably from his grandfather, William, Lord Herries, who again acquired it from the last holder of the Vicarage of Dumfries. The Church, the Bridge, and the Mill are thus linked together as parts of a common design. The great benefactress of the district in the 13th century, Lady Devorgilla, founded the Greyfriars' Monastery in the Town. She connected her province of Galloway with the Town of Dumfries by a stone Bridge of imposing dimensions, granting its revenues for the support of the Monastery. And it now appears probable that she also erected the Sandbed Mill at the end of the Bridge, its revenues, like the Bridge dues, being piously devoted to the Church.

No description of building is more frequently mentioned in medieval documents than mills. “Perhaps,” says Mr Cosmo Innes, “one of the oldest adjuncts to a barony—one of the most

grievous oppressions of the peasantry. It is often amplified by the addition *cum multuris et sequelis*, specifying that the multure dues of the baron's mill and the *sucken*, as we call the population thirled to the mill. These rights are the subject of very frequent transactions. The neighbours fought not only with the miller, who was the universal enemy, but with each other as to their *roume* and order of service. One curious point of the service of the *sucken* was the bringing home of the mill-stones. Considering that there were few or no roads, the simplest arrangement was to thrust a beam or young tree through the hole of the mill-stone, and then for the whole multitude to wheel it along upon its edge—an operation of some difficulty and danger in a rough district."

The doings in connection with the mills in this town, in times not far distant, fairly well illustrate the above passage. The burgh lands, as well as the kirk lands, were thirled to the mills, and the Town Council were careful that the possessors of these lands should not evade the thirlage. On the 11th August, 1652, the Council appointed a committee to see "The hail growin' cornes of the Towne and Kirkland this present croppe, And make Inventorie thairoff and give in to the Toun Counsell both of ye quantity of the lands and of the possessoris thairof." The inhabitants of the town also were required to have their malt ground at the common mills, and not only so, but they must not purchase ground malt which had been ground at any other mill. The following are examples of the Council's dealings in this matter:—"24th January, 1645. The Provost, Bailys, and Council, Considering that Edward Newall has taken malt by the Toun's Milns be his own confessione, Ordains him to pay five merks and double multure to the Taxmen." 3d December, 1646—"It is ordained that whosoever resets or receaves grund malt whilk are not grund at the Towns Milns Sall pay the double multure to the Tacksman farmers and Tacksman, And pay Ten pundis unlaw Conforme to the former acts thereanent." 11th April, 1687—"The Councill Discharges the hail Inhabitants of the Burgh of bringing in or brewing of grund-malt from the country, to the prejudice of the Touns Milns under the pain of being fined in the value of the malt and loseing their Priveledge of Burges-ship." The Council at another time, agree with the Tacksman of the Mills, to allow "Ilk discoverer of resetting or bringers in of ground malt ane

dollar for ilk load that shall be discovered, off the fore-end of the fine." Under the most favourable circumstances, restrictions such as these would be likely to lead to inconvenience, but in this instance the rigorous enforcement of them was severely felt, owing to the inadequacy of the Mills to overtake the work required of them. Spates and droughts are often recurring causes of difficulty, but oftener still the condition of the Mills themselves, the pleasant and refreshing sound of falling water as it slides from the revolving water wheel, being often mingled with discordant groaning and jolting noise of ill-fitting and broken machinery. On the 21st January, 1656, "Robert Stewart Tacksman of Mylnes, protestit that he wald give over the Tack at this instant term of Candlemas in respect they were not keipit. The Council protested that they were leading stanes to the Mill Dam and Caal, and were willing to do all diligence for keeping the said Milns in good order." The incapacity of the Town's Mills appear at this time to have reached an acute stage, and the Council found it necessary to supplement them, and for this purpose they secured from Maxwell of Broomholm a lease of Stakeford Mill, situated on the Troqueer side of the river. The acquisition of this Mill was immediately followed by an Act of Council, ordaining that all malt brought into the burgh must be ground at the "Touns twa Common Milns and Staikford Miln." All the three mills, however, are occasionally in want of water, or otherwise unable to work, causing the inhabitants much inconvenience, who are nevertheless still "ordaint to bring their malt to be grindit at the Common Milns," under the penalty of a fine, in addition to their ordinary multure, "except the said inhabitants first bring their said malt to remain at the Touns Milns, and let it remain there for the space of 48 hours, after which space they are to be frie to carrie their malt to other milns."

In order to meet the difficulty so often experienced, the want of water in connection with their water mills, and to put themselves into a position in which they can maintain in full all their privileges, the Council now proceed to erect a horse mill on the Upper Sandbed of Dumfries, some distance northward of the Over Sandbed Water Mill, and in 1687 Thomas Irving and George Carlyle secured a lease, to endure three years, of the Town's Mills, including the horse-mill. The new tenants, shortly before the term at which they are to take possession of the subjects,

seem to think they may as well endeavour to better their bargain. They petition the Council, and complain of the unsatisfactory condition the mills are in, the disadvantages of a horse mill, and that the multures have not been fixed—pointing out the necessity of doing something “for the removal of clamour,” and they ask the Council to give them the Dock grass instead of the Kingholm. As the petition helps out the picture of the Mills, the text is given here as it appears in the Minute Book :—

“1st Novr., 1687.—The said day the Council having considered the Petition given be Thomas Irving and George Carlyle, Tacksmen of the Milns of Dumfreis, making mention, That, whereas your petitioners being Tacksmen of the Milns of the Burgh of Dumfris for three years after Martinmass, at which time we are to enter, and it being at present notourly known that the Horse-miln wants ane wheel and other Timber work necessary to her, and also sufficient Stable, with a Loft, at the end of the said Miln, for keeping the miln horses and fodder, and that the water wall and dams of the Milnhole-miln are altogether Insufficient, and will goe away with the very first glush of water, if it be not speedily help’d, and seeing as yet there are no true measures condescended upon what multure each Boll of the malt pays, May it therefore please your Wisdoms either to take some speedy course for the reparation of the said Milns, and building of the said Stable and Loft, and put them in an sufficient case as Tacksmen can enter to them, Together with measures for lifting and receiving the multure of ilk Boll of malt for the removing of clamour for the time to come, always considering the vast difference and expenses betwixt grinding with horses and water, and servants for attending, and allow the Dock grass in lieu of the Kingholm, in respect of the vast difference, or else to frie us of our Tack, which we are willing to deliver up.” Their “Wisdoms” remitted this pawky petition to a committee, who reported in favour of a course with which we are familiar in our own day—“They thought it proper, in consideration of the great expenses the Toun hes been at in building the horse-milne, and the continual expenses the Tacksmen will be at in mentaining the horses, That the Tacksmen be allowed to take half a peck of ilk ten pecks of matt, and if the load consists of more pecks, that they cause measure the same, and that in lieu of both the multure and miller’s dues, and leaves the rest of the articles to the Toun’s consideration.”

Thus in consideration of the great expenses of the town and the great expenses of the tacksmen, some additional payment is required from the sucken inhabitants, bringing up the multures and miller's dues to 5 per cent. of the malt taken to the mills.

These old common mills of the burgh—small buildings, which with their straw-clad roofs and attendant water-wheels, turning with self-satisfied sleepy motion—must have been picturesque objects, joining rural and civic life, the scenes of multifarious and varied strifes, probably also of much pleasant gossip. They are one of the most frequent subjects of minute appearing in the town's minute books. The several succeeding Town Councils, who so unweariedly and zealously guarded the privileges attached to the mills, were composed of men, many of them of rank, education, and wealth, who to their civic interests often joined extensive landed estates in the country. Homer Maxwell of Speddoch, at one time Provost of Dumfries, curiously enough owned and occupied a house in the burgh which adjoined the Over Sandbed Mill. It was the custom to let the town mills by roup, over a long period for one year only, and ultimately for three years; and new tacksmen appear in possession nearly every new let. The tacksmen must have been farmers of the revenues rather than practical millers. Probably they might know as little about the Mills as the commendators did about Church matters spiritual, unconnected with the real revenues of the lands and worldly profits of the See. The miller, however, seems to have had a busy time of it. After a flood, the "water-gangs" required to be cleared of the sand with which they had been filled during the spate; in droughts, the dam-dykes needed to be stopped with fog; and at all times his eye must be abroad on the sucken to see that he is not defrauded of any of his dues. But the miller's greatest troubles lie within the mill. Malt is often brought there and left an indefinite time, and, in the words of the Council's minute, "albeit it should be lost," the miller is blamed. If it be not lost, he is still charged with having diminished its quantity, or of having substituted malt of inferior quality for that of better quality, which had been brought to his mill; and, indeed, to cheat the miller by all fair means and the most ingenious artifices seems to have been the constant aim of all, from the time of Adam, the first miller of Dumfries, downwards. The working millers, if we are to judge by one example, were not free of the propensity commonly attributed to the trade.

Thomas Dewar, miller, was taken red-handed stealing malt from the mill. It does not appear that he was in employment there at the time he committed the theft, and possibly his conduct in present circumstances contrasted with his behaviour when employed in the mills like that of Chaucer's miller—

“For ther before he stal but curteysly,
But now he is a thief outrageously.”

His punishment was severe and characteristic of the treatment of such cases at the period:—“12th June, 1663—The Counsell Ordaïns that Thomas Dewar be convoyit oute of ye Towne be the hand of the Hangman, and nevir to return therin, and a bank [drum] to be bait at his heele that non resett him heirefter in their house, under ye paine of ten merkis *toties quoties*, and Skurging of him out of the toun, Being taken red hand steiling malt out of the sek standing in ye Mylne.”

6th February, 1885.

Dr GILCHRIST, President, in the Chair. Thirty-two members present.

Deceased Members.—After the reading of the minutes of last meeting, which were adopted, the Chairman moved “That this Society record in its minutes the loss which it has sustained by the death of Dr Frank W. Grierson, and that the Secretary be instructed to convey the sympathy of all present to his bereaved parents.” In doing so the President said—“Most of you must be aware of the loss we have sustained in the early death, in a far distant land, of an earnest and valued member of the Society, Dr F. W. Grierson. His time, talents, acquirements, and collections were ever at its service when an opportunity presented itself. The simplicity of his tastes, the amiability of his disposition, the versatility of his talents, the unselfishness of his character, the purity and goodness of his whole nature, were a combination of graces and virtues rarely to be found in the same individual. Though his college curriculum was passed in quietude and without ostentation, he graduated with honours. To his usual medical studies he added a knowledge of several collateral subjects, by which his mind was broadened and matured. With character, talents, and acquisitions such as we

have noted, he could not have failed to be an honour to himself, an ornament to his profession, and an advantage to society. While his untimely death must cause a pang of regret to every member of the Society who knew him at all, it has produced in those who knew him better, feelings of a deeper and more permanent character. Though dead he yet speaketh. To us he saith, 'Time is short, life is uncertain. Be up and doing; work while it is day; the night cometh.'

On the motion of Mr M'Dowall, vice-president, it was also agreed to record the loss sustained by the death of the Rev. J. B. Johnstone, who had rendered valuable assistance in the archaeological department.

Donations.—The Secretary laid on the table pieces of ancient Egyptian papyrus and parchment, with hieroglyphics and Coptic writing thereon, as a donation from Dr Grant Bey; eleven pamphlets on different subjects from Mr G. F. Black; a collection of plants from Mr Arthur Bennett, F.L.S., for distribution among the members.

The Secretary also laid on the table Vols. I. and II. of "Bain's Calendar of Documents," which he had been instructed to purchase for the Library.

Exhibits.—The Chairman exhibited specimens of variegated sandstone found in the Nith, and an old engraving of the Reformers; also an old MS. book, dated 1815, and an old artistic pen-case on behalf of Miss M'Cracken. Mr W. G. Gibson exhibited a Caffre's skull, and pointed out some distinguishing characteristics; also an old oak chair that belonged to the box-master of the shoemakers in connection with the Seven Trades of Dumfries. Dr D. Lennox exhibited and described a number of curiosities brought from the Soudan, including a Remington rifle, an Arab spear, knife, camel sticks, armlets, and several photographs of the natives, and of the Mahdi.

The Chairman intimated that the Committee had held several meetings recently to consider the advisability of recommending the Society to occupy the Presbytery House, as a suitable place for holding their meetings, and for storing their books and specimens. The Secretary read the conditions on which the Presbytery of Dumfries would agree to the proposal. After a short discussion this was adjourned until next meeting.

COMMUNICATIONS.

I. *The Broads and Fens of East Anglia.*

By Mr A. BENNETT, F.L.S., Corresponding Member.

This paper was illustrated by numerous charts and specimens of almost all the plants mentioned therein, and was read by Mr M^r Andrew, Vice-President. In it Mr Bennett describes supposed excursions through this unique portion of English scenery. First, through the "Broads" of Norfolk—those extensive but shallow lagoons of water caused by the small dip of the rivers in that county; secondly, through the Fen district, in the neighbourhood of Ely. Starting from Yarmouth, and taking the train to Potter Heigham, the Broads are entered and botanized by boat. In these Broads such plants are to be found as *Lathyrus palustris*, *Rumex palustris*, *Lastrea cristatum*, *Lastrea Thelypteris*, *Chara Stelligera* (its second British station), *Chara tomentosa* (its first English station), abundance of Charas and Potamogetons, and other marsh and water plants; *Najas marina* (its only British station, discovered in 1883), *Liparis Loeselii*, *Carex paradoxa*, *Cladium Mariscus*, *Sium latifolium*, *Senecio palustris*, *Peucedanum palustre*, and abundance of reeds, *Typha*, *Scirpus*, &c. Leaving the Broads, Mr Bennett began the second part of his supposed tour, on this occasion through the Fen district from Ely. Here the drainage has been more complete than in the Broad country. The following plants are to be gathered in Wicken Fen, and in the Fen district generally:—*Teucrium Scordium*, *Calamagrostis lanceolata*, *Nitella tenuissima*, *Epipactis palustris*, *Viola stagnina*, *Potamogeton lanceolatus* (in the ditch by Burwell Drove—its second British station), *Selinum carvifolium* (near Chippenham on the moor, 1882). The Lincolnshire Fens, being now wholly drained, are not included in the tour.

Appended to Mr Bennett's paper was a note on *Carex Salina*, Wahl. var. *Kattegatensis* Fries, lately found on Wick Water in Caithness-shire.

II. *The Influence of Trees on Climate and Rainfall.* By Mr P. GRAY, Corresponding Member. (Abstract).

The author began by stating that forests, smaller aggregations of growing timber, even single trees, induced the deposition of moisture from the atmosphere, checked undue evaporation, and

equalised the flow of rivers and lesser streams. The destruction of forests in hot countries turned fertile lands into deserts; in more temperate regions was the occasion of desolating floods. It had been declared by a recent writer that indiscriminate forest clearing was the sin that had cost the human race its earthly paradise, and that war, pestilence, storms, fanaticism, and intemperance, together with all other mistakes and misfortunes, had not caused half as much permanent damage as this fatal crime against mother earth. The evil was of long standing, and its consequences might be traced throughout all history. Nevertheless it was still proceeding, and, until recently, without check. The North American Continent, on its first discovery almost one continuous woodland from sea to sea, had been nearly, and often wantonly, denuded of trees, so that timber was becoming alarmingly scarce in the United States. The Central Asian table-land, that *officina gentium*, the original home of our Aryan race, was now almost a desert, mainly from this cause. As a proof of this, the state of the Khanate of Bokhara was adduced, a region which, by the foolish destruction of its woods, had been in quite recent times shorn of fertility. It had been well wooded and watered, and was regarded by the Central Asiatics as a sort of terrestrial paradise. But the mania of forest clearing and the fury of civil war had wasted the country of its woods, and now immense tracts, once well-peopled and cultivated, were disappearing under the stealthy and unceasing advance of the sands of the surrounding deserts. The Russian possessions in the Caucasus were menaced by a similar fate from the same cause. Our recent acquisition, Cyprus, was once fertile to a proverb, but the wasteful cutting down of its forests had been followed by drought and sterility. If the higher lands of that island were, however, reclothed with timber, there was no doubt that its plains would again become well-watered and fertile. It was thus that Egypt was losing its proverbial character of a rainless country.

Even single trees induced precipitation. The inhabitants of one of the most arid of the Canaries were at one time supplied with water by a solitary tree, growing at the head of a deep valley, which daily strained a large quantity of water from the humid mist conveyed inland by the sea breeze. But this tree of life was now gone, and the mists, though they still remained, passed away without yielding their accustomed supply. This phenomenon might sometimes be observed in our own country on

misty summer nights. Trees also, it was obvious, checked evaporation from the soil, which had been ascertained to be about fourteen times less in woods than when the ground was bare. With regard to springs, it was matter of frequent experience that the destruction of wood dried these up in many cases. The general effect of woodland was to make the climate of the district more humid; the planting, early in the century, of the hills on the west side of the vale of Dumfries had made sheep-feeding unprofitable in that quarter, although trees in the course of their growth dried wet land.

The evil wrought by forest destruction in temperate climates was manifested in devastating floods. When the ground was bare of trees, the rain collected in torrents and rushed off towards the sea, swelling the rivers to a great height suddenly. The south of France was exceedingly liable to destructive outbreaks of the streams that rise on the northern flanks of the Pyrenees, the lofty summits of which intercepted and condensed the warm vapours brought by south-western gales from the Atlantic.

Various steps had been taken, especially of late years, to arrest the destruction of forests in France, Italy, Germany, and the United States. Only in this country had nothing been done to that end. In one direction, however, there had been gratifying progress—the planting of trees along the streets of the Metropolis and other large towns; and there seemed no reason why the good example should not be followed in smaller towns.

The subject of the economical value of plantations was well worthy of investigation. When, in the early years of this century, the planting of forest trees was strongly advocated by the Highland Society, Dr Hamilton, at its instigation, wrote a treatise of forestry for the use of landholders and tenants, in which he maintained that if two million acres of the waste land of Scotland were planted with larch and other forest trees, their value in a century would equal the amount of the National Debt, besides improving the remainder of the land to the extent of ten millions sterling per annum. Trees, the author observed in conclusion, unlike all other crops, increased nearly all the year round, and depended less than any on the character of the season; and there were many additional reasons for the practice of arboriculture, all tending to enforce the exhortation of the moribund laird of Dumbiedykes—“Aye be stickin’ in a tree, Jock; it’ll be growin’ when ye’re sleepin’.”

6th March, 1885.

Dr GILCHRIST, President, in the Chair. Forty members present.

Donations.—The Chairman presented, on behalf of Dr Grant, Bey of Cairo, a number of fragments of Egyptian pottery, pieces of alabaster, nummulitic limestone, fossil-wood, sandstone, Roman cement, ancient glass, and flint instruments. Mr W. G. Scott presented a fine specimen of the Great Northern Diver (*Colymbus Glacialis*), which had been shot in the preceding winter at Carse-thorn. The Secretary laid on the table the Second Annual Report of the Bureau of Ethnology, 1880-81, and the Smithsonian Institution Report for 1882, as donations from the Smithsonian Institution; also nine parts of the Linnean Society's Transactions, as a donation from Mr Robinson-Douglas.

Exhibits.—Mr Scott exhibited specimens of stigmaria, the coralline limestone, cannel coal, bitumen, and galena from the Leadhills; also a small stone ring found at Troquhain, New-Galloway. Miss Reid exhibited several specimens of the rocks taken from the excavations in the sinking of the Mersey Tunnel.

COMMUNICATIONS.

I. *Early Notices of the use of Tobacco in Britain.*

By Rector CHINNOCK.

II. *The Rocks of the Moffat District and their Fossil Remains.*

By Mr JAMES DAIRON, F.G.S.

I have thought it advisable to make this communication as useful as possible, so that it may be available as a kind of guide to the different localities around Moffat, leading to the best known situations in these parts, and as near as possible to where the working student may find the different genera and species of the Graptolitic family in the greatest profusion, and also in the best state of preservation. The finely rounded character of the hills of Upper Annandale, many of them exceeding 2000 feet in height, and covered with verdure to their summit, may not possess the rugged grandeur of the northern or western Highlands, still they have a beauty of their own, and in many parts make up some of the finest pastoral scenery in Scotland. Underneath their grassy covering we find the prevailing rock to be a Silurian grit or *Grauwacke*, of a grey or greenish colour, and

varying in some parts to a purplish tint. It is very hard and durable, and makes an excellent building material, being much used in the locality. There are associated with the Grauwackes a thin flaggy grit, and black Graptolitic shales, so often found in the scores and burns, which are formed in the hill sides by denudation. Fragments of these black shales may be found among the gravel in the bed of the Annan, six or seven miles distant from the parent rock at Hartfell, and I have frequently picked up some very good specimens brought down in this way. There is also a red sandstone rock, said to be of the Permian Age, which is found largely at the base of the hills, and in some parts has been denuded and carried a considerable distance into the valleys, where it is in many places mixed with small pieces of the Silurian grit, giving an idea that the hills had been covered with this red sandstone at an early epoch, before it was washed down to the base of the hills and there preserved. One of the best exposures of it is to be found in sections along the burn from Hartfell, a short distance off the main road going up to the well, and in other parts such as at Belderaig, Wellburn, and Frenchland burn. I have no doubt it is the equivalent of the Corncockle moor stone, but by no means equal to it, as it does not seem to be fit for any economic purpose whatever.

There are few trap dykes or outbursts of igneous rocks observable in the locality, except at Coatshill Quarry, which is wrought for road metal, &c. There is also another exposure of the same dyke now in the railway cutting between Moffat and Beattock, which was visited by this Society last summer (August 4th, 1884). We may safely state that there are none of the other rock formations which appear to have received such a crushing and contorting as these old Silurian rocks; and it is remarkable that there are so few faults to be found in the district of any magnitude.

We find the black Graptolitic shales in bands, tilted up at different angles from their original bed, in many parts inverted, while very frequently they are of a folding character, existing in bands of various heights, from three to five or six feet in thickness, with a parting of a white kind of pipe clay, of from two inches to six inches in thickness, which gets exceedingly hard when in a dry situation. The black Graptolitic shales seem to be composed of a dark mud, slowly and quietly laid down in a deep sea bottom, swarming with Graptolites and Crustacea, with

a few Brachiopoda, rarely with Serpulites, and small Orthoceratites. It often happens that we find occasionally in these upper shales a number of small faults in the cleavage joints, so that when we split up the slab and find a part of a Graptolite or a number of them on the surface of the slab, the other portions of the specimens will be on another plane, either above or below on the cleavage joint, but they may be rather difficult to find in most cases.

It will be seen from the specimens on the table that the lower shales are very much harder than the upper ones, and are generally not so much contorted or folded. Slabs of a much larger size can be obtained, and these split much more freely in any thickness of layer down to 1-16th of an inch than the upper. They are generally quite free from the aluminous matter, so abundant in the upper shales. Curious as it may appear they give off a very pleasant odour when closely confined—as in a Cabinet drawer—for any length of time. Whether this may be due to the great quantity of organic matter they contain or not, I am not quite prepared to say. The finest section of the lower shales to be found near Moffat is at Hartfell, on the north side of the burn, opposite the Spa, or on the left side looking up the Corrie; this section is nearly a quarter of a mile long, and about 40 feet below the upper crag. There is another parallel with it, and then a talus of *debris* at the bottom. From the bed of the burn to the top is fully 300 feet. The principal fossils of these shales are the branching forms, and belong to the following Genera, viz.:—*Pleurograptus*, *Diplograptus*, *Dicranograptus*, *Dicellograptus*, *Climacograptus*, *Glossograptus*, *Thamnograptus*, *Retiolites*, and portions of *Eurypterus*. One bed of these shales does not split up but falls into small tabular pieces under the hammer, caused no doubt by metamorphism, the action of hot vapours, and various other causes.

On leaving Moffat for Dobbs' Linn, a distance of eleven miles, we go along the Selkirk road for about a mile, when we come to the Frenchland Tower on the left; near that ruin runs the Frenchland Burn, which passes under the road. We may go up either side of the burn, and after passing the ruin we come (at 200 or 300 yards' distance) upon an exposure of the black shales with Graptolites. The shale is very hard and tough; it is on the left hand side of the burn going up. There are also other spots here, but they are rather limited in extent.

The next place we come to on the road is Carmichen Scaurs,

about five miles from Moffat, on the right hand side of the valley going up. The Graptolitic shales found there are not rich in fossils; neither are they in good preservation, scarcely repaying the fatiguing climb over the hills. However, I believe there are some good specimens to be got at Selcoth Burn, which runs down from Carmichen Scaurs, and falls into the Moffat Water. In addition to the most of the Birkhill fossils which are got here, some excellent sections are to be seen which would make the gorge well worth a visit. On the left side of the hills, a little past Polmoody farm, there are three deep scaurs, in which all the upper Birkhill fossils are got in a fine state of preservation. I have obtained some in relief from one of these scaurs. *M. lobiferus* is abundant in the middle one; also many other species, all belonging to the upper beds, a few of which are now arranged before you on the table. The next place we come to on the way is the Grey Mare's Tail. The rocks on this picturesque spot are all of Silurian grit. About a mile further on we arrive at Birkhill Cottage, where we stand on an anticlinal axis, or watershed, Selkirkshire being on one side and Dumfriesshire on the other—the Moffat water running the one way and the Yarrow the reverse. These black anthracitic shales stretch right across the country in a slanting direction from an anticlinal axis at Birkhill to the Irish Sea on the one shore, and to St. Abbe's Head on the other. If we now retrace our steps along the road following one of the two burns, the one which runs past the Cottage and joins that issuing from Dobbs' Linn (uniting about the entrance to the above place), thus forming the infant Moffat water, which runs in a straight line down the valley to the south-west, and joins the Amman a short distance from Moffat. The entrance into Dobbs' Linn has rather a rugged, dark, and weird-like aspect, which may be occasioned by the narrowness of the glen, the effect of the dark shales, and the absence of vegetation. While we must consider Dobbs' Linn to stand pre-eminent above all other parts in the Moffat district—and I might add that nowhere else can it be surpassed for the richness, profusion, and fine preservation of its fossil remains—to the physical student it cannot be surpassed for its fine rock sections, as well as its extensive range of the Graptolitic family, in both genera and species. There are other places in the district besides these named. The principal are Hartfell, Garpel Glen, Duffkinnel Water, Raehills, where some

excellent specimens are to be obtained, and also at Glenkiln, where numerous specimens belonging to the lower shales are got. Beld Craig is also an excellent place for both the upper and lower shales, where many fine specimens can be obtained. A stranger going to Beld Craig for the first time had better go to the head of the glen and then up the burn above the fall, for about a mile, during which distance the shales are barren, but after this we come upon the fossiliferous shales in abundance.

In Bromel's description of the fossils of Sweden (1727), which appears to be the earliest account of Graptolites known, the author supposes some of them to have the appearance of the fossil leaves of grasses.

The term Graptolithes (*Gr. Grapho*, I write, *lithos*, stone) is found for the first time in the "Systemæ Naturæ" of Linnæus, first edition. The name was applied to certain natural objects, many of which could not be Graptolites, and which he did not believe to be true fossils. In the twelfth edition of the "Systemæ," Stockholm, 1768, there is a description of a fossil named by Linnæus *Graptolithus scalaris*, the nature of which has caused a good deal of controversy. This *Graptolithus scalaris* was originally described by Linnæus, and figured in his "Scanian Travels" (*Scanska Resa*), published in 1751. I do not think we need follow this supposed Graptolite further. It would be rather difficult to form a correct opinion of it, whether it was of a Monoprionidian or a Diprionidian form, from the figure before us, which I have brought forward and drawn on an enlarged scale from that given by Geinitz (*Die Graptolithen* vi. fig. 20). The two other circular forms under *G. scalaris* are probably Graptolites; one of them has some resemblance to *M. Sedgwickii*, the other has got denticles on each side of the solid axis, which I have never seen before on a simple Graptolite. We also find their denticles running downwards from the initial point, and the same from their distal point, and meeting at the centre of the circle; this is a thing quite unusual in any form of Graptolite I have ever seen. There may have been some mistake in copying from the original, but in fact they appear to be more like a copy from a Grecian or Roman marble wreath—all they want is the ribbon on the top to complete the likeness, for in no way do they resemble the natural form of a Graptolite.

Historical Opinions.—In 1821, Wahlenberg considered the Graptolites of Sweden as very slender Orthoceratites. In this

view a few others agree with Wahlenberg. In 1839 Sir Roderick Murchison described and figured in his *Silurian System* three species of Graptolites. He was of opinion that Graptolites show most affinity with the living Pennatulidæ. We are indebted to Professor Sedgwick for the first account of the rocks of the Moffat district. In his memoir, "On the Geological Structure and Relations of the Frontier Chain of South Scotland," which was read at the British Association at Glasgow in 1850, he classed the rocks of the Southern Highlands into five successive formations. The oldest and lowest of these formations he called the Moffat group, embracing the greater part of the strata of the district. It was explained as "a great thickness of arenaceous rocks, in which pyritous and graptoliferous schist abounds to such an extent that the arenaceous beds become sometimes subordinate to it." In the same year he also described and figured twelve species of Graptolites from the anthracitic shales (Upper Llandeilo) of Dumfriesshire. But there can be no doubt that the most valuable paper which has as yet been published upon the rocks of the Moffat district is the memoir of Professor Harkness "On the Silurians of Dumfries," presented to the Geological Society of London in 1850. The author clearly adopted the view that the Graptolitic shales run in long lines among the unfossiliferous greywackes, and gave a short description of several localities along the three parallel bands of Hartfell, Frenchland, and Craigmichen. Following these bands for a number of miles through the district, he assumed their probable continuance from the one sea to the other, and seemed to consider that the great disturbances and upheavals which these rocks sustained were caused by three gigantic faults; but I find no proof of such faults running through the district. Sir Roderick Murchison, the same year, in his communication "On the Silurian Rocks of the South of Scotland," made some important statements upon the strata of the district—some sections of which he had hastily examined under the guidance of Prof. Harkness—and expressed his willingness to accept Harkness's theory of the identity of the strata forming the Graptolitic bands, but he preferred to interpret their geographical position on the hypothesis of great folds, the upper arches of which had been denuded. This view is the one now generally accepted. The dark mud-formed shales that are associated with the Greywackes, and in some parts highly anthracitic, are evidently the remains of an ancient

sea bottom, where those serriated and curiously formed Zoophytes, named Graptolites, seemed to have swarmed in extraordinary abundance; and, as far as we at present know, they began life in the Silurian system, lived throughout the whole period, and died out at the close of that formation. Although their geological range is not extensive, being confined to these old Silurian rocks, their geographical range is very expansive, being found in the British Isles, Australia, States of America, Canada, and various parts of the continent of Europe. It seems a difficult matter to determine to what class the Graptolitidæ belong, some authorities believing that they are nearly related to the Virgularia of the present seas, others to the Polyzoa, and others to Sertularia or Hydrozoa, because they have a chitinous or horny exterior, with hydrotheca or cells; but the Sertularia have no solid axis, neither are the cells overlapping each other like those of the Graptolitidæ. Again, the Polyzoa possess a calcareous exterior, and in that case are dissimilar. It was thought at one time that Graptolites attached themselves to the rocks or other objects at the sea bottom, while some observers say they were free-floating. From a number of specimens obtained about two years ago, I am thoroughly convinced that the greatest number were fixed bodies, especially the genus *Monograptus*. In the genera *Diplograptus* and *Didimograptus*, there are numbers of species which have no radical point of attachment, so I think we may conclude that they were both fixed and free-floating. On the other hand, the Polyzoa, with one exception, *Christatella*, a fresh water species, are all attached to some object, and also the whole of the Sertularia. General Portlock appears to have been the first to suggest definitely that the Graptolites were allied to the Sertulariæ and Plumulariæ; however, all modern observers are now agreed in placing the Graptolites somewhere among the Hydrozoa.

I think it may be advisable just now, as there may be some of the members present who are unacquainted with the Graptolitidæ, to explain the structure of these interesting Zoophytes, and with which I will be as brief as possible. Unfortunately, they are rather small objects, but with the aid of these large drawings, and also this model of a Graptolite, I hope to make the description of them much plainer than by describing the specimens you see on the table. When we describe one we describe the whole of the genus *Monograptus*, the polypery being

all built up on the same principle, although they may be of different size and outline. The model shown is of the Graptolite (*Monograptus priodon*), enlarged about 30 diameters. It may be either straight or curved, with a solid axis or stipe, upon which the polypery is built. The common canal is well marked, in which was contained the cœnosarc, from which each polyp was developed. On the margin of the periderm which surrounds the cœnosarc, the hydrothecæ or cells are constructed, each individual polyp going through the cœnosarc to the subsistence of the whole colony. The whole of the outside of the polypery is composed of a chitinous or horny substance, generally in the course of mineralisation, the mouth of the cellule being at the point of the denticle, each cell being inhabited by a polyp, and having communication with the common canal. The simple *Monograptus* is supposed to have four margins or borders surrounding a hollow tube, the inner resting on the common canal, which is not defined, the superior on the top, or point on which is the cell mouth. This description applies to nearly all the other simple forms of graptolites. In collecting the above organisms I think it is a matter of much importance to procure, if possible, those fossils with both their distal and initial points, as they can be identified with greater certainty, besides rendering the forms of the organisms more complete.

III. *A Memoir of the Rev. Mr Gatt, Minister of Graitney, 1727-87.*

By Mr J. GIBSON H. STARKE, Vice-President.

The subject of this short notice—the Rev. James Gatt—seems to me worthy of having his name recorded in the proceedings of this Society, as an eminent parish minister in Dumfriesshire who, during his lifetime, was probably as widely known as any among his contemporaries; and whose memory still lingers among a few of the present generation. No formal biography of him has ever been published, and it is now impossible to obtain sufficient materials for this purpose, but from two brief notices of him which have been published, and from traditionary accounts, he was not only beloved as a minister, but eminent as a scholar.

The leading events of his life are given in the *Fusti Ecclesie Scoticanæ*, by Dr Hew Scott; and an appreciative sketch of his character appeared in "Good Words" for December, 1876, by the Rev. Mr Edgar, formerly minister of Graitney, or, as it is now

spelled, Gretna. His name stands alone among the eminent men of that parish in the Statistical Account of Dumfriesshire, where it is also mentioned that many of his MSS. are in the possession of the "Misses Gibson, Edinburgh." These ladies, now long deceased, were my grand aunts, and then well known in Edinburgh society. It was when a boy, spending part of my holidays in Gretna, that I first heard the name of Mr Gatt mentioned with reverence and regard; but the old people who then loved to speak of him are all dead; and, indeed, since the railway invaded what was then a secluded parish these old-world stories, as I may call them, have gradually given place to new and more exciting narratives.

My present purpose is to supplement the information which has been already published by a few traditions within my own knowledge, chiefly obtained from the late Rev. Mr Smith, minister of Tillicoultry, who in his boyhood heard them from his uncle, the late Rev. Mr Smith, minister of Morton, in Dumfriesshire, both of whom entertained through life feelings of great veneration and regard for Mr Gatt's memory.

Mr Gatt sometimes spelled his name Gath, but I understand this was because in Latin "Gatheus" is more euphonious, and Gatt was his proper surname. In the Statistical Account it is spelt Galt, which has been a printer's error. He was born 10th January, 1700, in Cullen, Banffshire; studied theology in the University of Edinburgh; was examined and licensed in 1727; and appointed assistant and successor to the Rev. Mr Black, then minister of Gretna, towards the close of the same year. He was ordained minister of the parish, 30th April, 1730, and died as father of the Synod, 31st October, 1787, in his 88th year, and after a pastorate in the parish of altogether 60 years.

He married in 1741 Miss Jean Gowanlock, daughter of the then minister of the adjoining parish of Kirkpatrick-Fleming, who died in 1786, being a year before himself, aged 86; and both are buried in the parish churchyard of Gretna.

They had no family, and adopted a niece, Miss Maclaurin, who died in Edinburgh unmarried, a venerable and highly respected lady, in 1818, aged 88.

A portrait in crayons of Mr Gatt represents a shrewd, kindly, and intellectual countenance beneath a very old fashioned white wig, and dressed in canonicals. This portrait has been sent to

me as a gift in a generous manner by the Rev. Dr Edgar of Newburgh, formerly of Gretna. He was stout, and rather little in stature.

He was a great classical scholar, and when a student in theology he obtained an Exchequer Bursary, in acknowledgment of which he yearly composed a Latin poem. He was recommended by the General Assembly in 1822 as a good Gaelic scholar; and I have no doubt that this language was then spoken by many in the south of Scotland, and would be a special qualification for a rural minister in this district. But his chief delight was in Latin versification, into which he translated the Book of Job and the Proverbs of Solomon. Some of his lighter poems in that language, entitled "Miscellanea Metrica," are said to have been fine scholarly productions. In Steven's History of the High School of Edinburgh it is stated that one of the masters—Mr Luke Fraser—read a Latin memoir and criticism on the Latin compositions of the Rev. Mr Gatt for the Literary Society, which existed from 1807 to 1821 in Edinburgh; but although search has been made for the MS. it has not been discovered. Mr Fraser was famous as a Latin scholar, and as the members of this Society were mostly masters of the school and Professors of the University, this circumstance testifies also to the scholarship of Mr Gatt. He kept a diary in Latin, which I have seen, but it is now difficult to decipher. It records that he finished his translation of the Proverbs of Solomon on 4th July, 1734, and had made a copy of it by March of the year following, which copy he took with him in May to Edinburgh, when he likewise attended the meeting of the General Assembly of the Church, and submitted it to Mr Ruddiman, the greatest of Scotch grammarians; who, I find, was like Mr Gatt, a native of Banffshire; and at that time settled in Edinburgh as a printer and publisher of several learned Latin works. On his return to Gretna from Edinburgh he makes this entry in his diary, dated 26th May, 1735—*Gloria sit Deo in excelsis, quod ego incolumis reversus sum a Synodo Nationali.*

He was also a Hebrew scholar, and I show you a small Jewish calendar or almanack, now very worn and fragile, which bears within it the following writing:—"Ja. Gatt, Graitney, gifted by Jacob and Simon Levi, who brought the same from London."

It is not only, however, as a great scholar that Mr Gatt's memory has been so long preserved; but for his unaffected piety,

bright example as a parish minister, and his humorous disposition. He was a watchful shepherd over the flock committed to his care, and it is mentioned in the Statistical Account that the "Parochial registers and transactions of the Kirk-Session, among which last are interspersed many remarkable occurrences, are extremely accurately written by Mr Gatt, and pretty voluminous. They commence in 1730 and continue for 60 years, after which there is an almost entire deficiency in the minutes of the Session." Several extracts are given by Mr Edgar in his paper already mentioned, which therefore I do not here repeat, as I wish this notice to be confined as much as possible to circumstances which have not yet been made public.

The following illustrates the earnest piety of the pastor. It is an entry in his diary of a morning reflection when rising at 5 o'clock, and is dated 20th March, 1736 :—

"Arise ! oh James, and save from flames
Thy people who are sinning ;
Angel ! declare me who they are,
It's time I was beginning."

In 1745 Prince Charles Edward and his followers passed through Gretna on their enterprise to seize London, and subjugate the kingdom again to the Stuart dynasty. They rested for refreshment at the Manse, but Mr Gatt having no sympathy with this rebellion against the reigning Hanoverian Sovereign, "retired," he tells us, "in a vessel to Bowness," across the Solway, leaving his wife to do the honours. There is a tradition that all the valuables of the parish were concealed in a garret of the Manse to escape the cupidity of the rebels, and that Mrs Gatt entertained the Prince and his officers so well that no theft was committed. In proof of this tradition, I am able to show you some solid silver spoons which, I believe, were used upon that occasion. They are handsome, and in good preservation, having been well taken care of in my family for now more than a hundred years. They bear the initials of Mr Gatt, and of his wife, and also of his niece, to whom they were first bequeathed, and who was a relative of the Gibson family. I consider them the most interesting among my antiquarian possessions. Mr Gatt was of very simple habits and primitive character, with a power of humour and repartee which has been handed down from generation to generation within the parish of Gretna. When he first arrived there from Edinburgh an inquisitive person was

anxious to learn where he originally came from? "Oh," said Mr Gatt, "I left the Highlands one misty morning, and I never could find the way back again!"

On applying for an augmentation of stipend, his plea was that he had to exercise a great deal of hospitality to persons from England; for when the small stream called the Sark, between the two countries, was swollen with rain, the travellers got dipped in that Sark and he got dipped in debt.

On one occasion that he was dining with Sir William Maxwell at Springkell, a blustering fellow at the table thought to make a butt of such a simple-looking man as Mr Gatt, and went on with offensive remarks, which he no doubt thought should be accepted as mere banter, until at last Mr Gatt, looking at him, said-- "Sir, I have been in my day struck with the hoof of a horse, and borne it patiently; but who can tolerate patiently a kick from the heel of an ass?" The company received the reprimand with silent approbation, and the snob was crestfallen for the rest of the evening.

By his own request Mr Gatt was buried in a north and south position to show his belief that it matters little how the body is placed provided that the soul lies right in the sight of God. An old tombstone bears the following inscription to his memory in the churchyard of Gretna:—

"Here lyes the Revd. Mr James Gatt, late Minister of the Gospel here, who died October 31st, 1787, in the 88th year of his age. He was 60 years Minister of this parish, during which long period he discharged the office of a pastor with the most unwearied diligence and fidelity, exemplifying in his walk and conversation the power of that religion which he inculcated. By the simplicity of his manners, and the affability of his conduct, he was highly esteemed by his flock, and deservedly held in the greatest veneration by all who had the pleasure of his acquaintance.

"In memoriam perpetuam est justus. Utinam post hujus vitæ exitum, felicitatem consequar Cœlo Repositam.

(The just man is held in perpetual remembrance. Oh that, after this life has ended, I may obtain the happiness laid up in heaven.)

IV. *Modern Egypt.* By J. A. S. GRANT, Bey, M.D., LL.D.

This communication was read by the Secretary, and gave a brief sketch of the physical features of Egypt, the various races which inhabit that country, a description of the larger cities, and some interesting details respecting its government.

3rd April, 1885.

Dr GILCHRIST, President, in the Chair. Thirty-eight members present.

New Member.—Dr Collie, Castle Street, Dumfries.

Donations.—Mr Coles presented eighteen specimens of the genus *Hypnum*. The Secretary laid on the table the Transactions of the Huddersfield Natural History Society, Vol. I. of the Journal of the New York Microscopic Society, gifts from the respective societies; also several pamphlets on lake dwellings as a donation from Mr G. F. Black.

Exhibits.—Mr Rutherford exhibited specimens of the Red Admiral, *Vanessa Atalanta*, and the Painted Lady, *Cynthia Cardui*, and remarked that these butterflies were very rare in this district in the preceding summer. He also exhibited the larva of the Puss Moth, *Cernua venula*.

The Society's New Rooms.—The Secretary intimated that since the February meeting the committee held three meetings in connection with the Presbytery House scheme, and he submitted the following minute, which the committee had unanimously adopted, viz. :—“That the scheme to arrange for the use of the old Presbytery House be approved of on the condition that sufficient subscriptions be received to cover the expense of necessary repairs and alterations.” After a short discussion, on the motion of the Secretary, seconded by Mr W. M'Dowall, vice-president, it was agreed “That this meeting approves of the action of the committee; they were to further consider the scheme, and report at a future meeting called for the purpose, before deciding thereon.”

Field Meetings.—It was agreed that the summer Field Meetings be held as follows:—May, to Spottes Glen; June, to Parton; July, Thornhill District; August, Bridge of Dee and Brig House Bay; September, Burnswark Camp.

COMMUNICATIONS.

I. *A Leaflet from the Book of Nature.* By Mr F. R. COLES.

Nature has but one volume and one language, and reveals herself to us through but one great channel of communication. From the sparkling of the remotest star to the gleam of ephemeral life in the lowest polyp there is for humanity but one

study. What are our arctic and tropic, seasons and tides, temperatures and mechanisms but the expression of man's attempts at catching hold of the universal law, of his assimilating as much or as little of it as he can to the wants of his own nature ?

And this one grand medium for the accomplishment of a productive study of nature, this one faculty without which a Newton or a Humboldt were impossible, with which the humblest of us can add a cubit to the stature of scientific truth, is *Observation*.

We can never emphasize this fact too deeply. The ingenious scientist of the middle ages sat in his cell and dreamed out a theory of the universe ; and a pretty brainful of cobwebs he bequeathed to the keener vision of our age. The modern scientist, albeit his ingenuity lacks something of the charm of his predecessor's, begins and holds to the right method throughout his enquiries, and into what hidden regions his microscope and scalpel plunge, not many of us as yet perhaps fully acknowledge.

It is not, however, on mediæval theories or modern speculations that I want to speak to-night ; not to weigh planets or compute the age of the Glacial epoch ; but, with the view of helping fellow-students, novices especially, towards cultivating this faculty of *observation*, I am going to describe a little of the life that goes on, all unheeded by most of us, close to the ground and amongst the foliage of common plants on any common bit of mother earth. We transport ourselves during the glowing hours of a fair summer's day out of sound and sight of brick and mortar, and choose a strip of hedgerow well feathered with the despised "weeds" which the roadman shovels aside into unsightly heaps. So long as it is not excessively dry, it is pretty much a matter of indifference what spot we choose. Here, for instance, is a grand clump of the common cow parsnip (*Heracleum Sphondylium*), with its stout bristly stem and handsome leaves. In one of the deep-cloven sinuations of this leaf you will very likely find a tiny land-snail (*Zonites nitidulus*), whose glossy house shines with a lustre Aladdin might envy. If you lift the shell, the warmth of your finger will doubtless tempt the little creature to crawl out, when, with your pocket lens, you note its dark, clear grey tentacles and brown-tinged body ; touch it ever so gently, and in go "horns" and body back into the glossy shell—timid, sensitive little mollusk ! Perhaps at the root of our tall umbelliferous plant a good specimen of a very common but well-marked land-

snail may be taking a mid-day nap (*Helix arbustorum*). Its richly mottled, brown shell, the clear porcelain-white of its outer lip, and deep blue-black of the animal itself make it an object of interest and some beauty.

See! what a busy region we disturb when we lift this stone! Half-a-dozen scarlet-bodied spiderets, "soldiers," scampering away in most unmilitary haste to hide under crumbs of brown earth; here a grey-brownish slug, there a jet black one, larger and fatter, put out first one and then another tentacle, resenting the intrusion on their slumber, while you wonder how such big, soft animals can lie, to say nothing of sleeping, under a mass of stone like this. Beetles, black and dusky brown, flashed with prismatic green, scuttle off at a break-neck pace out and over the rough hollows and hillocks made by the stone, and begin a vigorous exploration of the closely woven covert of grasses and *Adoxa*-leaves, which to them is a forest of mystery and safety. Those leaves of the *Adoxa*, and, still more, its root will repay your study. Those white roundish cocoon-like things are spiders' nests; these pellucid globules, for all the world like single grains of boiled tapioca, are the egg-nuclei of snails. Pocket them carefully, you may find they are phosphorescent, and it is yet a moot point what species have and have not phosphorescent eggs. Under the driest part of the root-entangled edges of our hollow is a whole colony of *H. rotundata*—one of our very commonest land shells, but also one of the most beautifully sculptured. Close behind these, half hid by a drooping frondlet of a lovely, and also common, moss (*Thm. tamariscinum*), is the brilliant banded shell of *H. hortensis*, the shell whose countless variations and likeness to *Helix nemoralis* cause so much discussion amongst persons who prefer to disintegrate genera rather than unite species. One broad distinction between the two shells, whether species or not, is easy to bear in mind—the wood snail, *H. nemoralis*, has the outer lip dark chocolate-brown, almost black, while in *H. hortensis* the lip is usually white. Searching more narrowly into the crevices of this earthy hollow, you will perhaps discover that those minute gleamings of silvery opalescence, mixed up with the crumbling earth, are, when you isolate them, two other species of *Zonites*: *crystallinus* and *purus*; the former one of the very loveliest of our land-shells, its tiny tenant's body being nearly as translucent as its house, which is aptly likened to crystal. Another pretty and generally-distributed little mollusk is likely

to be here, *Vitrina pellucida*, the glass shell. Something moving on the damp side of the stone catches your eye. What are these things? like, but far smaller than, grains of rice; and they are moving along one after another in a hair's-breadth fissure in the stone. Pick them up with great care, using your tweezers, and on examination, under a good lens, which had better be done at home, you will find reason to marvel how Nature moulds, by means of so soft a substance as the "mantle" of a snail, a tiny monument, exquisitely sculptured, and solid and durable as marble itself. And this on such a minute scale. It would take fully two hundred of these shells, *Carychium minimum*, to cover the surface of one square inch—yet see how wonderfully their delicate convolutions are chased and carved into spiral twistings and grooves and furrows innumerable. There comes another small traveller with his house on his back, not so ornamental a dwelling as the last carried, but still well worth study. This shell is of a peculiarly rich oily gloss (*Zua lubrica*) and a rich tawny brown, unlike any other land shell of ours in these two respects. How well it contrasts with the grey tones of the stone and the pure white of *Carychium*.

We noticed, in passing, just now the graceful frondlets of a moss, but there are sure to be a dozen species of this lowly, but very lovely, sub-kingdom and its allies, beautifying the borders of the little hollow we are so interested in, and not beautifying earth alone.

There is a reason for the existence of all life, animal and vegetable, quite apart from our direct needs and caprices. And, without a great deal of brain-racking, we can discern, surely, that one reason for the existence of mosses is to keep the moisture of rain about the roots of herbs and trees, and so, to help, in the long run, to equalise temperature and climate. Mosses are, in fact, a striking example of the power of littles. Look at the long ruddy stems which carry the fruit of this same moss. There is good work for the microscope for many a long winter evening in the examination of the leaves and fruits of the one genus *Hypnum*, of which this moss is at once a very common and a very lovely type.

This bit of hunting ground of ours is sure, almost, to have *H. triquetrum*, *loreum*, and perhaps *serpens* and *molluscum*, besides others more or less conspicuous; amongst the roots of which you will very likely find one or two species of the shell *Vertigo*, and that

minutest and perhaps loveliest of the Helices, *H. pygmaea*. Below this little two-inch high crest of damp soil well moistened by the stored up rain-drops, fallen days ago on the larger mosses, are clumps of other genera, e. g. *Pogonatum aloides* and *nanum*, *Physc. pyriforme*, possibly a little of the minute *Ph. subulatum*, while the common Fork Moss, *D. scoparium*, thickly tufts the shady nooks above. Here is a moss with tiny apples each on a stalk—a very pretty little plant is it, *B. pomiformis*. Possibly you may notice a tall, beautiful-leaved moss with four or five or even more golden-ruddy fruit-stalks upspringing together out of its crown of green foliage. This is a prize. It is one of the genus *Bryum*, *M. undulatum*, and an unforgettable trophy.

On the very stone we turned over we may find—especially if it be rather newly fallen from the dyke behind our Cow Parsnip—six or seven species of mosses all very frequent—the dainty *Bryum argenteum*, *Grimmia pulvinata*, commonest, softest tufted little moss there is; *G. Doniana*; *Hom. sericeum*, whose silk-lustrous leaves and prolific fruitage mark it out well; *H. populeum*; one or two *Tortule* or awl-mosses; and others easy to name when once known, but difficult to describe.

Then, deep in among the stems of such larger mosses as we have noticed, and the roots of neighbouring flowering plants, the ground is intricately covered with the inwoven greenery of such beautiful and elfish-looking plants as the Commoner Hepatics, e. g., *Loph. bidentata*, *Plag. asplenoides*, and *Pl. spinulosa*. So lavish is nature of means and ways of nourishing different grades and successions of being, and of supplying waste and loss, for ever filling up and restoring, and making paradises out of deserts. And what fairy-like pure paradises they are—these fresh, pellucid-green, labyrinthine groves of moss and glades of Hepatic! The dwellers therein are, no doubt, happy in their way; very little reckon they of taxes and war-levies! One imagines them as free and beautiful in their very lives as the little crystalline houses they carry about so glibly. And yet, did we study them at home, narrowly, there is as little doubt that we should find even so magnificently housed as creature as *Helix pygmaea*, or our pet mollusk *Carychium min.*, has a dread of some monster of a wood-louse, or a worm, or of some conscienceless terrific fellow-snail! Then even the larger mollusks themselves are a prey to sundry little parasites, which, though they may not injure their host fatally, no doubt inspire him with an occasional wish to “shuffle

off this mortal coil." And so we find that, after all, man is not the only tormented animal, that even so low in the scale of life as the soft-bodied invertebrates he has sympathies somewhat in common—that the very crawling snail which he, in cruel thoughtlessness, crushes with his boot-heel, had its birth and upbringing, its loves and quarrels, its midnight revels among the gloomy recesses of the hedge, its uses and functions as one link in the never-ending chain that girdles this mystery of life.

I have thus far tried to show what may be seen under almost any common bit of hedgerow, and have purposely omitted much that is often visible, but which I cannot describe, namely, the numbers of small insects that vanish like specks of dust on the upturning of a stone, and leave a sense of bewilderment at their numbers, their variety, their rapidity of movement—their sudden non-existence, so to speak. Many plants also within touch of such a commonplace bit of ground would be observed, and long time occupied in noting and describing their striking points and peculiarities. No need to complain of want of material, at any rate. What I want to impress on anyone here likely to need a stimulus for his observation, is that the right seeing of any natural fact is in itself a most valuable possession, while the import of a rightly-recorded series of facts so grasped may—who knows?—have definite influence upon general science in after years.

Begin courageously. The first step is the most difficult everywhere; and in the study of Nature, by hedgerow and hillock, one of the most difficult first steps is to rid oneself of the fear of the taunt conveyed in the words "peculiar," "eccentric," "queer," and the like. You dread coming home, after a long healthy "holy-day" among the glens and woods, with bulging out pockets, vasculum crammed to bursting, and a look that means *supper*, lest a laugh be raised at your appearance. Learn to contemn such laughter. Common-place persons will have it that So-and-so has a weakness, poor fellow, for beetles, or "oor Tam's just crazy ower thae mosses," and so on. Well, if you feel any sympathetic power within you attracting towards Beetles or Mosses, roll the war back into the enemy's camp, and tell them theirs is the weakness who follow every foolish fashion with every changing moon, and theirs the craziness who prefer the gorgeousness of a "Solomon in all his glory" to the apparel in which the Creator clothes the grasses of the field.

For the majority of persons, especially those who are encompassed continually by the strain and struggle of modern city life, nothing is better than to give free rein to a Natural History hobby. Nothing so completely forces one into patience, so utterly contrasts the clamorous bustle of man's work-a-day notions with the deep silent sustained movement of all Nature's processes, as to get gradually and everlastingly in love with some one group of creatures, whom you cannot hurry, who will not be the slaves of your human precision, but into whose beautiful and orderly existence the more deeply you gaze the more captivated you become, while the riddles of their being may eventually help you to solve the riddle of you own. In the words of Goethe, whose intuition nearly a century ago led him to detect and expound the law of development in plants which we to-day are accepting as the basis of botany, let us remember that "Nature is always true, always serious, always severe; she is always right, and the errors and faults are always those of man. Him who is incapable of appreciating her, she despises; and only to the apt, the pure, and the true does she resign herself and reveal her secrets."

II. *The Arctic Shell-beds of the Clyde.* (Abstract.)

By Mr R. W. MACFADZEAN.

In this paper Mr Macfadzean refers chiefly to the post-tertiary deposits at Garvel Park, Greenock, where the surface of the Old Red Sandstone crops up in a series of ridges with deep hollows between, and the post-tertiary clays lie in these hollows reposing on the denuded surface of the boulder clay, and near the level of present low water. The whole deposit is from 20 to 30 feet thick, and may be divided into several strata, only distinguishable from each other by their contents, for they glide into one another without any perceptible break, and suggest the idea that they are the result of one continuous though varied marine action. There is first a layer of fine clay containing no shells, over which lies the shell bed, in which the chief interest is centred. The fossils preserved in it are perfect in outline, and the bivalves such as *Astarte Sulcata*, *Cyprina Islandica*, and *Pecten Islandicus*, are mostly found with the right and left valves in the juxtaposition of life. They are of a more arctic character than the inhabitants of the present seas; and with the exception of some

broken and accidental forms, littoral shells are absent, while the presence in great numbers of deep sea microzoa and mollusca proves the pelagic character of the deposit. Above this shelly clay there is a zone of clay without shells, covered in its turn by a layer containing recent and littoral shells. In no other deposit have the arctic deep sea and the temperate littoral periods been so well divided. There succeeded to the last Glacial epoch a gradual but comparatively rapid rise of sea level until the Garvel Park was immersed to a depth of at least 600 feet, and it became the habitat of an arctic pelagic fauna. During this rise considerable denudation of the boulder clay took place, a fresh ledge of which was annually disintegrated. The constant change of conditions, currents, and materials gave rise to the greatest diversity in the deposits, and during the rise and subsequent fall of the sea level our present shores became successively the littoral, the laminarian, and the pelagic zone, so that in many localities all kinds of bivalves are found mixed together in the same bed. It was contended by Mr Macfadzean that, as the same evidences are also found in Scandinavia and in N.E. America, the rise and fall of sea level were universal and simultaneous over this quarter of the world. He exhibited a classified collection of shells obtained by him from the Garvel Park deposits, and offered to present it to the Society if it was thought of sufficient interest to the members.

III. *The Ancient Lake Dwellings of Scotland.*

By Mr G. F. BLACK, Corresponding Member.

Mr Black, in a lengthy communication on the above subject, referred to the first discovery of lake dwellings in Scotland in 1781, and to the explorations carried on at Zurich in 1853-4. Since 1857 several have been noted in this country, and described by various archaeologists, especially that at Lochlea, Tarbolton, Ayrshire, by Dr Munro and Mr R. W. Cochran Patrick, M.P. In reference to this lake dwelling, Mr Black gave a minute description of the size and situation, and a list of the various relics found during the explorations. Mr Black remarks that lake dwellings have been found at Lochmaben, Sanquhar, Friars' Carse, Loch Orr, Lochwood, Closeburn, Corncockle, and in the parish of Morton, in Dumfriesshire; and, in conclusion, suggested that

this Society should undertake the investigation of any one of these.

The Rev. W. Graham remarked on this paper that he accidentally discovered the lake dwelling in the Castle Loch, Lochmaben, about 40 years ago. He said, "it lies south-west and north-east; in length 50 or 60 yards, and in breadth from 30 to 40 yards. The piles are of oak, and some are cut for upright standards, and others for cross beams. The rafters are cut to suit a roof at an angle of 45 degrees."

IV. *Lovely Polly Stewart.* By MR JAMES BARBOUR,
Vice-President.

A parcel of documents came recently into my hands, which, on looking over their backings, I found to be legal sweepings, and among them were several wills or copies; but as the name of this Society did not figure on any of the wills I put the parcel aside as being devoid of interest. I had been scanning Ramage's "Drumlanrig and the Douglasses," and after putting the papers aside I returned to it, when, after perusing less than a page, I came upon names of persons corresponding to those I had seen on the backs of the wills. I now opened the parcel and made a comparison, and not only did the names correspond, but the persons referred to were the same. There is a copy of the will of William Stewart, who, when residing at Closeburn Castle, and acting as factor for Dr Menteith, was an intimate friend of Burns and the subject of his song, "You're welcome, Willie Stewart," the second stanza of which runs:

"Come, bumpers high, express your joy,
The bowl we maun renew it;
The tappit-hen, gae bring her hen,
To welcome Willie Stewart."

There is the will of Miss Hannah Lee, William Stewart's step-daughter, a young lady then 21 years of age, residing at Closeburn Castle with her mother and stepfather, and who died at the age of 23. There is also a copy of the will of Mrs Catherine Stewart, wife of Mr Bacon, landlord of Brownhill Inn, where Burns was wont to frequent, and who on one occasion, finding the landlord too fond of thrusting himself into the company of his guests, composed the epigram:—

"At Brownhill we always get dainty good cheer,
And plenty of bacon each day in the year;
We've all things that's neat, and mostly in season;
But why always BACON?—come, give me a reason."

These papers are interesting inasmuch as they relate to persons who were intimately associated with Burns, and, as we have seen, were themselves the subjects of his verse, and also the immediate relatives of one whose chequered life forms a romantic story, and whose beauty the Poet celebrated in song:—

“ O lovely Polly Stewart !
 O charming Polly Stewart !
 There's not a flower that blooms in May
 That's half so fair as thou art.”

Polly Stewart was the daughter of William Stewart, half-sister of Hannah Lee, and niece of Mrs Catherine Stewart, the persons whose wills are here. I do not know that the papers add almost anything to the story of Polly Stewart, but they contain references to herself, and to her family, who are the principal beneficiaries under her father's will. Polly was first married to her cousin, Ishmael Stewart, by whom she had three sons, and the will of Mrs Catherine Stewart bears—“ Item, I leave and bequeath to each of William, Charles, and Alexander Stewart's children procreate of the marriage between the now deceased Ishmael Blowfield Stewart, late residenter at Springfield, and my niece Mary Stewart, the sum of five pounds sterling.” Mrs Stewart also remembers Polly herself in the matter of dress:—“ Item, I leave and bequeath to my niece Mary Stewart, daughter of the said William Stewart, to purchase a suit of mournings, the sum of ten pounds sterling ;” and after leaving another niece five of her best gowns, and three of her best aprons, she leaves the remainder of her clothes to a cousin, “ my best silk cloak excepted, which I leave and bequeath to my niece Mary Stewart.” Ishmael Stewart, Polly's first husband, had, according to Dr Ramage, to leave the country under a cloud, and dared not return ; and it was never known what became of him. Polly was married a second time to George Welsh, farmer in Mortonmains, grand-uncle of the late Mrs Thomas Carlyle, a man highly respected, by whom she had two daughters, Hannah and Grace. The marriage proved to be unhappy, and a separation took place, when Polly joined her father in Maxwelltown, where he had come to reside. From his will we learn that William Stewart was residing in Maxwelltown, that he possessed the lands of Bilbow and the houses built thereon, lying in the parish of Troqueer ; he was tenant of three farms belonging to the Duke of Queensberry, and joint-tenant of Kelhead Lineworks, and he held one-fourth share of the woollen manufactory carried on at Cample under

the firm of Stewart, Mathison, & Co. George Welsh, Polly's husband, is named a trustee. Polly is evidently outcast, as no provision is made for her in the will, and she is not named except as the mother of her children. The testator, after making certain provisions, appoints that the whole amount of accumulated stock is to be divided equally among his five grandchildren, viz.—William, Charles, and Alexander Stewarts, and Hannah and Grizel Welshs, daughters of the said George Welsh, and all the five children of "my daughter Polly." A sort of sketch is got of Polly's sons. William is described as having the misfortune of being very lame, and in so bad a state of health that in all probability he never will be able to do anything towards his own support. Charles has already evinced a great degree of thoughtlessness and inattention to his education, and has now entered an apprentice on board a merchant vessel. Alexander is still young and at school, and provision is made for his receiving a college education. Charles continued the thoughtless course indicated in the will, and Alexander also appears to have become imprudent and unfortunate, as we find by references to them in Polly's letters to the late Mr Pagan, King's Arms Hotel, Maxwelltown. "Poor Charles!" she writes, "his fate interests me deeply, his heart was good, his kindness to me when last in Scotland made a lasting impression on my lacerated heart." Again, "the precarious life of my poor Charles produces no hope to learn what became of him; his honest heart was early made to feel the chequered path that marks life. 'Some are made to mourn.'" Of Alexander she writes: "The sudden death of my father proved a fatal stroke to the welfare of Alexander. The volatility of his disposition plunged him into a labyrinth of future misery. Me he deceived at every point; rendered himself wretched and me miserable." The remainder of Polly's own sad story is soon told. At the time she was residing with her father in Maxwelltown, numbers of French officers, prisoners of war, were in Dumfries, and among them a handsome Swiss named Fleitz, to whom she became unfortunately attached. She joined her fate to his, accompanying him to France, where he found employment in the Swiss troops of Louis XVIII. On Louis Phillippe ascending the throne the Swiss mercenaries were dismissed, when Fleitz with Polly returned to Switzerland. Here Polly wrote a number of deeply interesting letters to Mr Pagan, chiefly in reference to her family, of which one or two extracts have been given. After 30 years' absence she returned to Scot-

land in the hope of meeting her son Alexander. She did meet him, but the result was unsatisfactory, and she returned to France. "After some years," says Dr Ramage, "Fleitz died, when Polly took refuge with a cousin in Florence. Her mind at last gave way, and she was removed to an asylum, dying there in 1847, in the seventy-second year of her age. She had survived all her children, who had all died without offspring."

5
22d May, 1886.

SPECIAL MEETING.

Mr STARKE, Vice-President, in the Chair.

The Secretary read the various minutes of former meetings, referring to the "Presbytery House Scheme," and stated that in accordance with the minute of meeting held on 3d April, he had called this meeting.

The Chairman explained the various steps which had been taken in the matter, and stated that this meeting had been called specially "to decide whether the 'Presbytery House Scheme' should be proceeded with or abandoned."

Mr Barbour, vice-president, submitted plans of the Presbytery House, and stated that he estimated the repairs and alterations to cost about £80—£60 on the building, and £20 on painting, gas-fittings, &c.

The Secretary stated that the Presbytery had promised £20 towards the expense, and that he had spoken to several members and friends of the Society, and he had received in this way the promise of £20 additional.

After a general discussion, in which Messrs Dods, Chrystie, Innes, and Thomson took part, Mr Thomson moved—"That the 'Presbytery House Scheme' be proceeded with, and a sub-committee be appointed to issue circulars requesting subscriptions for the purpose, and that when £60 be collected, the sub-committee authorise Mr Barbour, V.-P., architect, to commence operations." This was seconded by Mr Dods, and unanimously agreed to. Mr Thomson again moved, and Mr Dods seconded, "That Dr Gilchrist, Messrs Starke, Barbour, Lennox, Watson, and Wilson be appointed the members of the sub-committee, with full power to make and conclude an agreement with the Synod, Presbytery, Kirk-Session, and Town Council, the parties interested in the Presbytery House." This was also unanimously agreed to, and the meeting afterwards adjourned.

SESSION 1885-86.

SOCIETY'S NEW ROOMS, *2d October*, 1885.

ANNUAL MEETING.

Dr GRÄCHRIST, President, in the Chair. Twenty members present.

New Members.—Mr George Thomson, solicitor, Dumfries; Mr R. P. Fotheringham, Dumfries; Rev. R. F. Mullins, Dumfries; Rev. J. H. Oswald, Miss Mounsie, Miss Nicholson, Thornhill; Mr J. R. Wilson, Sanquhar; and Mr Lindsay, The Holm, Sanquhar.

Donations.—Rev. Mr Weir presented, on behalf of the Presbytery of Dumfries, two books, entitled “*Scotia Illustrata sive Prodrromus Historiæ Naturalis*” and “*Insectorum sive Minimorum Animalium Theatrum*” (1634). The Secretary laid on the table the Transactions of the Edinburgh Geological Society and of the Edinburgh Geographical Society, donations from these Societies; Vol. V. of the United States Geological Survey, from the Smithsonian Institution; one part of the Microscopical Journal, and several parts of the Transactions of the Edinburgh Botanical Society from Dr Allan.

Exhibits.—The Chairman exhibited a number of minerals and specimens of rocks and some plants collected by him in the north of Scotland in the preceding summer.

SECRETARY'S REPORT.

The Secretary (Mr J. Wilson) submitted the following report:—In presenting this general report for the past session, I am happy to state that the Society has ever been mindful of the objects for which it was instituted, and has attended to them with some degree of success, as will be seen from the various details which we now submit.

At the Annual Meeting last year there were 204 names on the roll, comprising 4 life, 182 ordinary, and 18 honorary members. During the session 1 life member, 9 ordinary, and 2 honorary members' names were added, but 26 were removed—6 by death, and 20 others due to removal from the district, resignation, or

other causes; so that our membership numbers now 190, or 14 less than last year. Notwithstanding that our membership is smaller a greater number take a more active part in the different meetings. In the winter the usual seven monthly meetings were held, at which 21 communications by 14 different members were read and discussed, this being 7 more than last session, and unequalled in the history of the Society. Several of the papers read are of great importance, and testify to the usefulness of the Society in investigating our local antiquities as well as the fauna and flora of the district. The usual five Field Meetings and a special one in the end of July were held, all of which proved both instructive and enjoyable to those participating in them. The average attendances at these meetings were 32·1 for the winter and 30·1 for the summer, being larger than those of last year, which were 31·6 and 20·4 respectively. On the 22d of May last, a Special Meeting was held, at which it was unanimously decided to proceed with the scheme for obtaining possession of suitable rooms for the keeping of our books and specimens, and for holding meetings more frequently. A Special Committee—consisting of Dr Gilchrist, President; Messrs J. Gibson Starke and J. Barbour, Vice-Presidents; Mr J. Lennox, Treasurer; Mr Watson; and Mr Wilson, the Secretary—was appointed to make and complete the necessary arrangements, and to collect subscriptions towards defraying the expense. This has been done, and through the kindness and liberality of a number of ladies and gentlemen interested in the Society, we have now taken possession of our own rooms on lease for 15 years at a nominal rent, and I believe when the balance sheet will be made up, free of debt, without drawing on the ordinary funds of the Society. The importance of this undertaking cannot be over-estimated, for it will supply a desideratum long required for extending our usefulness.

There were 12 Committee meetings and several other meetings of the Special Committee held during the session, all of which were well attended.

The transactions for the years 1880-83, which had been prepared last session, have been issued to the members in November last free of charge. A sub-committee has been appointed to prepare them for the sessions 1883-84 and 1884-85, and this is so far done as to be ready for the printer when desired.

The donations of specimens have not been so numerous as last

year, and owing to the arrangements for the new premises being under consideration, they were not deposited in the Observatory Museum. The donations of books were more numerous. In addition to the annual reports or transactions of the following Societies—The Smithsonian Institution, New York Academy of Sciences, the Peabody Museum, the University of Christiana, the Geographical Society of Scotland, Edinburgh Geological Society, Glasgow Archæological Society, Glasgow Natural History Society, Perthshire Natural History Society, Berwick Natural History Society, The Essex Field Club, Huddersfield Natural History Society, and the South London Microscopical Society—we received nine parts of the Linnean Society's Transactions from Mr Robinson-Douglas, one part of the Microscopical Journal and seven parts of the Edinburgh Botanical Society from Dr F. Allan, and a number of pamphlets on Archæological subjects from Mr G. F. Black. The Society has made an important addition to the Library by purchasing Vols. I. and II. of Bain's Calendar of Documents. All these books have been circulated among the members, but imperfectly owing to the want of proper library accommodation.

Having thus briefly narrated what has been done in the past, let me add a word or two with regard to the future. I expect we shall have a sufficient number of communications to fill up the ordinary meetings of the ensuing session, and therefore we should utilise our rooms by having a course of bi-weekly meetings, or lectures, for the benefit of the junior members. We have sufficient accommodation for specimens of all the local birds and fishes, as well as for innumerable beetles, butterflies, and other insects. If each member would undertake to add to our collection a single specimen, the present empty cases would be well filled by our next annual meeting. We would then have a better opportunity of studying the lower creation, and learning that—

“ In these Thy lowest works, yet these declare
Thy goodness beyond thought and power divine.”

This report was cordially adopted, and the Secretary awarded a vote of thanks for his honorary services. The Rev. Mr Weir, in seconding the motion, expressed on behalf of the Presbytery of Dumfries, the satisfaction which that body felt at the alterations and improvements made by the Society on the Presbytery House.

TREASURER'S REPORT.

The Treasurer (Mr James Lennox) submitted his annual statement, showing the Income and Expenditure to be as follows:—

INCOME.		EXPENDITURE.	
Balance from Session		Printing of Transactions..	£14 15 0
1883-84	£25 12 3½	Excavations at the Old	
140 Subscriptions at 2/6...	17 10 0	Bridge	1 4 6
Entrance Fees	0 17 6	Bain's Calendar of Docu-	
1 Life Member's Subscrip-		ments (2 vols.) ...	1 6 0
tion	2 2 0	Printing of Circulars, &c.	3 1 6
Arrears	1 5 0	Secretary's Outlay ...	7 19 0
Transactions and Flora		Treasurer's Outlay ...	0 4 1
sold	1 0 6	Balance due Society—	
Interest	0 2 3	In Bank	18 17 6
		In Treasurer's hands...	1 1 11½
	<u>£48 9 6½</u>		<u>£48 9 6½</u>

“Audited and found correct.”—(Signed) WM. BAILEY.

This report was unanimously adopted, and the Treasurer was also thanked for his honorary services.

Election of Office-Bearers.—The following were elected office-bearers and members of committee:—President, Dr Gilchrist; Vice-presidents, Messrs J. H. Gibson Starke, J. Barbour, W. M'Dowall, and F. R. Coles; Secretary, Mr J. Wilson; Assistant Secretary, Mr R. Barbour; Treasurer, Mr J. Lennox; Committee, Major Bowden, Dr J. Cunningham, Messrs J. Rutherford, R. Murray, T. Watson, A. Innes, J. Neilson, J. Maxwell, J. Davidson, and J. W. Dods.

Notice to alter Rule I.—Mr J. Lennox gave notice that at next meeting he would move that the name of the Society be made shorter, by omitting the word “Scientific” in the title, as is stated in Rule I.

Periodicals, &c.—Proposals to purchase some periodicals and to hold more frequent meetings were remitted to the Committee with power to be dealt with.

6th November, 1885.

Mr COLES, Vice-President, in the chair. Thirty-five Members present.

New Members.—Messrs J. Symons, J. R. Macdonald, C. S. Phyn, J. W. Whitelaw, and S. Grierson, Dumfries; J. Wallace, Auchenbrack, Thornhill; James Paterson, Moniaive; and H. A. Macqueen, Thornhill.

Donations.—The Chairman presented 50 specimens of land and fresh water shells found in the district; he laid on the table notes on *Naias Graminea*, and the report of the Botanical Exchange Club, as donations from Mr Arthur Bennett.

Exhibits.—Mr Rutherford exhibited a tree frog from India and a puss moth; Miss Robb exhibited a number of New Zealand plants and several articles of the Maori handiwork, also a few specimens of limestone and minerals from the neighbourhood of Bristol.

Alteration of Rule.—Notice having been given at last meeting by Mr Lennox, it was unanimously agreed to alter Rule I. so as to omit the word “scientific” in the title of the Society.

The Secretary reported that the Committee had decided to have an intermediate course of lectures during this session, on the third Friday of the month, and to purchase *Science Gossip*, the *Scottish Naturalist*, and the *Micrographic Dictionary*. The Committee’s decisions were unanimously approved of.

COMMUNICATIONS.

I. *A List of Kirkcudbright Mollusks.* By Mr R. F. COLES, Vice-President.

Last April, at the close of our Winter Session, I was asked to make a list of the Land and Fresh Water Mollusks belonging to our district. Thoroughly to comply with our Secretary’s request—to tabulate into some resemblance of the arrangement planned and set forth in the Catalogue issued by the Conchological Society all the species and forms of these interesting creatures likely to be or actually found in our locality—would occupy a great deal more than the leisure-hours of the two seasons at my disposal. I feel, therefore, that some apology is due from me, when I submit only these few mounted specimens, and can give names of only some 44 species out of a total of 132 admitted as British. Two things have caused this—the limited area to which I have confined my researches, and the fact of so many of the mollusks being minute, and, without good typical specimens for comparison, difficult to distinguish. Many of them also are numerous in their genus, *e.g.*, *Vertigo*, with eleven species and five varieties—some of them one-fifth the size of a grain of rice; *Helix*, which has 25 species and about 112 varieties; and *Limnæa*, perhaps the most ubiquitous and prolific of all our aquatic mollusks. Judging by the recently published census of

Mr Taylor, malacology in Scotland is not "done to death," to say the least. There are only some three or four counties from which reports were sent in, and these of the most meagre description. In our own district there have already been good workers, Dr Buchanan White, Mr Rimmer, Mr R. Service, and others. To Dr B. White, I believe, we owe the first actual record, printed fifteen years ago (Sept., 1870) in "M'Diarmid's Handbook of Southwick and Colvend," for which Rev. J. Fraser wrote the botanical chapter. In the list of L. and F. W. Mollusks there given Dr White records thirty-six species, adding "that probably more than a dozen other species inhabit the district." His record contains—*Arion ater*, *L. agrestis*, and *marginatus* (three out of the fourteen slugs known as British), *S. putris*, *V. pellucida*, seven species of *Zonites*, eight *Helices*, *Z. lubrica*, *C. rugosa*, *B. perversa*, *P. cylindracea* and *Anglica*, *V. edentula*, only two *Planorbis*, *albus* and *contortus*, *Ph. fontinalis*, *Limnæa lacustris*, *truncatula*, and *palustris*, *A. fluviatilis*, the decollated form of *B. tentaculata*, *V. piscinalis*, and *Sph. corneum*, with the yellow variety, *flavescens*.

In this list there are seven species which I have not yet come upon, while additionally to it I have found *Pisidium fontinale* and *pusillum*, *M. margaritifera*, *Valvata cristata*, *Planorbis nautilus*, and *spirorbis*, *Ancylus lacustris*, *Zonites purus*, *H. aspersa*, *concinna*, and *Carychium minimum*.

In addition to all these, I subjoin the following names, which have been recorded for the district by other workers:—*Pisidium amnicum* and *nitidum*; *Anodonta cygnea*; *Planorbis nitidus* and *complanatus*; *Limnæa stagnalis*; *Succinea oblonga*; *Helix lamellata*, *sericea*, and *ericetorum*; *Bulinus acutus* and *obscurus*; *Pupa ringens* and *marginata*; *Vertigo pygmaea* and *pusilla*; *Cochlicopa tridens* and *Acme lineata*.

I am unable to mention localities for the above nineteen mollusks, since their names appear simply thus towards the close of Maxwell's "Guide to the Stewartry"—in a list compiled by Mr Service from various sources. There are, therefore, just 60 species recorded of land and fresh water mollusks belonging to the S.W. of Scotland. Any attempt to allocate them to the three counties or to compile a census from them is unhappily at present impossible. This must be left to time and to our own care and interest in the subject. A few words respecting the comparative or rather relative rarity and abundance of the species

may not be thrown away on any here present who may be induced to work in this department. Of the three very common garden snails, *H. Aspersa*, *nemoralis*, and *hortensis*, it is scarcely necessary to say more than that, in most people's opinion, the less we have and see of them the better for our gardens and ourselves. *H. arbutorum* is almost as common, if not indeed in some localities more frequent than *hortensis*. Many of the *Zonites* are abundant — *nitidulus* and *cellarius* especially. *Clausilia rugosa* may be found in the chinks of many an old wall by the score; *H. hispida* and *concinna* with *v. subrufa*. I have taken dozens off in a very few minutes from under the leaves of strawberry plants; while you can hardly lift a biggish stone on a crumbly bank of rubbish and "weeds" without seeing *H. rotundata*. Among the aquatic mollusks *Valvata cristata*, *Planorbis Nautileus*, *L. palustris*, and *An. lacustris* are the rarest — the last I have found only in one locality, in the water of Tarff. *Sphaerium corneum* and *Bithynia tentaculata* are to be seen in numberless quantities in many a shallow runlet of the Dee, more particularly near Threave Castle.

And now, lastly, for a brief paragraph of suggestion to any members who may be induced to give the help of their enthusiasm in working out the distribution of our mollusks. It is always pleasant to break up virgin soil—to work in a new field—to explore. And in hunting for mollusks in Galloway and Dumfriesshire there is, besides this charm, the added attractiveness of its beautifully-varied natural scenery and rock configuration—a potent factor in our botany, and one which, I am sanguine enough to think, may be quite as interesting in almost every other department of natural science. Other motives for collecting mollusks are, the comparative easiness of the work, the slight outfit required, the small space into which your specimens can be stowed, ready at any moment for reference and study. Then the actual charm of the quest itself, *e.g.*, the exciting events of a good day's dredging over a lonely loch, hauling up with your stout line and grapple perhaps a cluster of *Auodontæ*, or an ante-diluvian boot, a battered and rusty axe head, or some long searched for tiny mollusk like *Planorbis nautileus*, or a rare aquatic plant; the delight of watching, as you lie full length on the flowery brink of some pellucid stream, its tiny deeps and shallows, with the minnows "staying their wavy bodies 'gainst the stream," or its amber pools where innumerable *Limnæi* and

Sphaeria are curiously gliding, and floating shell downwards; while further up, where peaty linns look bottomless, and the pike gourmandises on everything he can get a hold of, with what a sense of victory you haul in your bag net and, letting the muddy water drip out of it, behold some new or rarely caught mollusk in the hey-day of his spirits, wondering with his blind but sensitive tentacles what in the world has come over the "spirit of his dream" in the sunless depths where long-rooted pond-weeds spread their canopy of dusky green.

There are several points with respect to the life-history of our mollusks worthy of careful and patient observation and record. For example, there is the controversy over *Helix nemoralis* and *H. hortensis* to settle. We could each add our quota to the elucidation of this vexed question were we to note whether these reputed species breed together, whether they at all seasons are found in one and the same locality, what their food is, what, in short, are their points of resemblance and of distinction. In carrying out the practical study of our L. and F. W. mollusks, it is always well to note down, at the time of capture, what is the plant they appear attached to, and, when coming indoors, preparatory to killing your specimens in boiling, literally *boiling*, water—the only merciful and instantaneous method of disposing of them—to note particularly the general colour of the body, the surface-texture of the back, and the shape of tentacles and "foot," with an approximate indication of their length as compared with the length or diameter of their shells. After leaving your mollusks for a few hours in the water, a little neat and skilful manipulation with a bent pin will, in nearly all cases, fetch out the soft parts, leaving you with a shell more or less clear, but always worth reverent examination, and revealing, under the lens, curves of sculptured traceries and hues prismatic to an amazing degree. Think for a moment of what has yet to be done in ascertaining the causes of variation in species, sub-species, and variety. There are certain species like *Linnaea peregra*, whose capacity for variation in shell form is something astonishing. We could—or we may some day at any rate—arrive at a clue which will help us in threading out towards the truth a path through the labyrinths of these seemingly lawless creatures—absolute Robin Hoods of the submerged forests of our tarns and streams—if the facts of their lives and their general surroundings were only narrowly and well watched.

Other points arise in the study of these numerous but easily passed over creatures. For instance, I am fond of thinking that it is only to cloak our laziness and ignorance that we divide and sub-divide Creation into orders and genera and species. There are always, if not in our own Flora and Fauna, then in some other, links between one genus and another; and, if we only knew more, we should readily admit that really there is no such thing as "species," or, rather that what we call a "species" is only the outcome at one particular epoch, a climax, of innumerable gradations in forms of being. It is doubly interesting, therefore, to be able to fill up an admitted gap in the natural sequence. By finding, for the first time in Kirkcudbright, this little shell, *Valvata cristata*, one day amid hosts of *Planorbis albus* on the floating pondweed-leaves, one of these links was made clear to me. *V. cristata*, not only by internal organisation, but by shape of shell, connects most palpably the Genus *Planorbis* with the Genus *Valvata*. *Planorbis* has a flat discoid shell, in many species perceptibly convex, indeed, on both sides. Compare one of them with the commoner *Valvata* (*V. piscinalis*) of our Fauna, and see the difference. Then note how neatly and timeously this tiny *cristata* comes in to blend the two genera, with its shell, as Gwyn Jeffery remarks, "perfectly flat in all stages of growth"—so like a *Planorbis albus*, and yet so unmistakably a *Valvata* in texture and colour, and those more subtle distinctions which make the real difficulties of science. In the same way *Physa acuta*, a European species, connects our two species of *Physa*, *hypnorum* and *fontinalis*; and another shell, which we ought to get in our district, *Zonites fulvus* is the link between the true *Zonites* and the true *Helicidae*. I might multiply instances of this kind; but as this is not a lecture upon Malacology, I must refrain. My object is merely to suggest the direction in which many of us might find plenty of work and study on taking up the subject of mollusks and shells. I repeat, in conclusion, that, in addition to the healthful pursuit of watching and hunting for these strange little creatures, there are no obstacles such as expensive tools or accessories of any kind in the path of the adventurer. Even time is not so much a *desideratum* as in almost any other Natural History pursuit. Some scores of pill boxes of various sizes, an old mustard tin or two, a long stick to which a salmon gaff or a bag-net can be quickly fitted, and, I must add, a passion for dabbling in cool, clear-

running streams, with strength of will enough to probe the unsavoury mysteries also of stagnant ditches—with this simple outfit there is no reason why any one of ordinary intelligence should not soon become an expert mollusk-hunter, and not only gain health of mind and body, but add his facts to the ever-increasing sum of knowledge.

II. *A Day on Ben Lawers* (Abstract). By Mr J. M'ANDREW.

In this paper Mr M'Andrew described a visit made in company with sixteen other botanists, under the guidance of Dr Stirton, to this celebrated district. The visit to Ben Lawers was made on Saturday, 18th July, 1885, from Killin. To botanize Ben Lawers alone, Lawers Hotel is the most convenient inn to stay at, but Killin is more central for the whole Breadalbane range of mountains. Dr Stirton proved an excellent guide, as he has botanized the mountain for all sorts of plants for the past 30 years, has been nearly 80 times on the Ben, and knows all its best spots, and has made many discoveries on it. The ascent of the mountain is neither difficult nor dangerous, but it is very tiresome to "work," owing to the rough and rocky nature of its surface. It is among mountains of mica-schist like Ben Lawers that are found deep glens, rugged ravines, and abrupt precipices. This rock formation flanks more or less all the principal mountain chains in the world. The western ravine is thus described—"Rocks of all forms and sizes, jagged points protruding through grassy slopes, huge boulders over and under which the botanist must crawl to secure his treasures, dashing mountain rills, and splashy wet ground were the characteristic features of the ravine." "The eastern ravine is much narrower, and there are no high rocks in it—in fact, it is a deep gully in the mountain with large broken rocks in it. At the bottom of these eastern corries lies Loch-na-gat."

Ben Lawers is the Scottish paradise of Alpine plants, no other mountain in Britain equalling it in the richness and variety of its Alpine flora. The Clova mountains come next to it, and in many respects are a formidable rival. Botanists from all parts of the world have for a long time, and especially for the past thirty years, trod its mica-schist, and botanized in its ravines, and have returned to it with increasing affection and admiration, and yet its botanical treasures are not exhausted, for almost every year reveals some of its hidden rarities. By turning up "Hooker's

British Flora," "Hobkirk's Synopsis of the British Mosses," or "Leighton's Lichen Flora of Great Britain," any one can convince himself of the great number of plants recorded from Ben Lawers. It may be asked—Why is Ben Lawers so famous for Alpine plants? Several reasons may be given—Its friable mica-schist affords an excellent soil for plants, its rugged and varied surface, and its immense ravines, running towards the east, with their boulders, rocks, corries, and even rills, give shelter to rare cryptogams; its frequent dews and mists afford abundant moisture; its rocky ledges and grassy slopes afford resting places for plants; it is high, 3984 feet. Its rills have *Saxifraga aizoides*, *Oxyria reniformis*, &c.; its grassy slopes are carpeted with *Alchemilla alpina*; its damp places have *Tofieldia palustris*, *Juncus biglumis*, and *triglumis*; it is the only British station for the beautiful *Myosotis alpestris*; it has *Saxifraga hypnoides*, *Cherleria sedoides*, *Sibbaldia procumbens*, *Salix reticulata*, *Cerastium alpinum*, &c.; while near the summit may be found *Saxifraga cernua* and *rivularis*; and in sheltered crevices everywhere *Aspidium Lonchitis*, *Asplenium viride*, and *Cystopteris fragilis*. Ben Lawers is very deficient in three genera of mosses—the *Andreaea*, the *Sphagna*, and the *Campylopi*. Some of the rarer plants are becoming extinct, as *Hypnum Halleri*, *Stylostegium cespiticium*, and a few others. *Carex ustulata* once grew on Ben Lawers, and was considered extinct in Scotland, but has been confirmed for Perthshire this summer. Its Cryptogamic Flora has a very close affinity to that of Scandinavia. We find grass on Ben Lawers up to the very summit, with no heather. The water of its rills and streams is clear as crystal and cold as ice, everywhere perfectly safe to drink. In one of the two papers on the "Mosses of Ben Lawers," given in the Transactions of the Edinburgh Botanical Society, Dr Stirton says:—"There is no other mountain in Scotland I have climbed that presents such curious and perplexing anomalies in its cryptogamic vegetation. Almost at every step in the more favoured spots the botanist meets forms which seem to mock his powers of discrimination, and above all to warn him that nature is not to be cramped and confined by any classification of man's devising."

III. *The Botany of the Sanquhar District.* By Dr A. DAVIDSON.

Last year I addressed you on this, among other subjects, and though it gives me much pleasure again to add a few, and I hope

not unimportant, facts to Topographical Botany, I regret to think that Field Botany in the neighbourhood of Sanquhar has a limit, and though my researches have been pushed in the least frequented and unexplored districts, I have been unable to add so many new localities and species as I did last year, when the district was practically unexplored. I will in this paper then speak of the Sanquhar and Kirkconnel parishes only.

Viola lutea, the yellow pansy, is abundant on all the upland meadows, and, along with the variety (*V.*) *amæna*, forms in many parts quite a pleasing feature in otherwise barren districts; but in no place do they appear in such variety and profusion as at Wanlockhead, where they bedeck the green swards with their variegated petals as richly as do the gowans on the lowland meadows, while the heaths are in like manner enriched by the golden bloom of the pretty whin, *Genista anglica*. The knob-berry, *Rubus Chamæmorus*, is also found here in fair abundance, and in a few of the glens *Saxifraga hypnoides* is not uncommon, but few other flowering plants have been able to find a footing in the wet and sedgy soil of these gloomy uplands. *Spiræa salicifolia*, the willow-leaved spiræ, has become naturalised in Ellick woods. *Arctium intermedium* has been found in two or three localities in the parish, and *meum athamanticum* has for the first time been discovered growing in abundance on Carco Hill in Crawick. *Andromeda polifolia*, wild rosemary, on Sanquhar moor comes as a welcome addition, and *Myosotis cæspitosa*, not considered common in Dumfriesshire, is found in fair abundance on upland rills. *Galeopsis versicolor* is very abundant; and the terrestrial variety of *Polygonum amphibium* has been found in one locality. *Lamium album*, *Helianthemum vulgare*, the rock rose, and the tuberous comfrey, *Symphytum tuberosum*, have been found in Kirkconnel parish, the latter established near the railway station, and on many parts of the line is probably an escape. New localities have been recorded for *Salix pentandria*, and the crack willow, *S. fragilis*, is a native of Ellick Woods. In September last I was delighted to find *Epipactis latifolia* flourishing in the woods of Crawick; and though that has only been recorded in the Statistical Account of Dumfriesshire as natives near Tinwald and Dumfries, it is probably not uncommon, being easily overlooked. Its presence in Crawick is in all probability due to the preservation of the natural woods on that river. *Mentha piperita*, found in one or two localities, is probably an escape.

Last year, from examination of an imperfect specimen of the yellow lily from Sanquhar Loch, I hazarded the opinion that it was not *N. pumilum* as recorded, but *N. intermedium*, and to make certain I this season forwarded a few specimens to our distinguished member Mr A. Bennett of Croydon, who, always willing to lend a helping hand to amateurs, pronounced it to be what I surmised it was. This, then, you will observe, is an important addition, as at that time it was only found in two localities—viz., Northumberland and Perthshire. Since then, however, Mr Jas. Fingland, Thornhill, has found near Moniaive a plant apparently similar, but of this Mr Bennett is not yet quite assured. The long-headed poppy, *Papaver dubium*, is abundant on the Sanquhar and Kirkconnel railway track, and the variety *rivalis* of *Mentha sativa*, not previously reported from this shire, is in this district the most abundant of all the mint tribe. Monk's rhubarb, *Rumex alpinus*, has established itself near Euchar Head, having probably escaped from the gardens there. *Juncus supinus* is not uncommon, and a variety called *fluitans*, not noted in the London catalogue, grows abundantly in Auchengruith mill-dam. This is a somewhat rare plant, and Mr Bennett informs me it has been recorded from Perthshire, Forfar, and Ireland. The variety *amœna* of the yellow pansy, as before stated, is quite common. Two new willows also deserve mention, viz., var. (*a*) of *Salix purpurea* and *tetrapla* of *S. phyllificifolia*. I may here call attention to the omission of *Salix alba* from our local flora, which, though not a native, is quite as deserving a place as *S. viminalis*, to which the same remark applies. In the investigation of the varieties of *Rosa canina* good progress has been made, and I am able to report the following five new varieties, viz.:—*urbica*, *dumetorum*, *tomentella*, *coriifolia*, and *verticillacantha*, and probably *pruinosa*, and another variety coming under no distinct category, resembling *verticillacantha* in all points save the sepals, which are turned up and persistent. These make, with those found last year, eleven varieties of the dog rose, and from all likelihood more will be discovered. Two casuals deserve mention on account of their rarity, viz., *Galium tricorne*, found near Sanquhar station, and *Symphytum asperrium*, not a British plant, in a corn field near Auchengruith, and probably introduced with seeds. In Kirkconnel parish four new plants were discovered, viz.:—*Thalapsi arvensis*, near Carco; *Anthemis Cotula* and *Convolvulus arvensis*, on the railway

embankments; and *Erysimum cheiranthoides*, near the railway station, a casual far removed from its native habitat, the fen districts of England.

Before dismissing this subject one plant deserves special notice. This is a *Carex*, new, as far as I am aware, to Scotland. It is common on the higher hills, and its form is probably familiar to most of you, who, on the authority of the local catalogue, have passed it over as *C. Ederi*. I knew the plant was not *C. Ederi*, as I had gathered the latter on an excursion in the north, but I did not consult any authority on the subject till this season, when I submitted it to Mr Bennett, who pronounced it to be *C. flava, minor* (Townsend). *Carex Ederi*, with which it has possibly been confounded, I have failed to discover, and doubted its existence until Mr Fingland, Thornhill, showed me some specimens gathered from some locality near Ruthwell. These remarks then comprise all I can record as new to the county, but do not by any means indicate all that has been done in Upper Nithsdale and elsewhere. Mr Brown, Auchenhessnane, has found *Lathraea Squamaria* in the woods there. Mr James Fingland, Thornhill, has added many new habitats and not a few new species to the Flora of Dumfriesshire.

Before taking farewell of this subject I have thought the present an opportune time for recording the census I have taken of the plants in Sanquhar Parish. These of course may by more careful examination and analysis be increased, but up to the present time 440 species and varieties have been found, and their localities separately recorded for future reference, or for the use of this Society if the members so will it. Of these 440, 7 are casuals introduced with or as seeds, 10 are garden escapes, and 14 are planted trees or shrubs. These numbers may seem small when compared with those recorded from more southerly parishes, with more productive soil, and more congenial climate, yet when we consider the comparative sterility of this district, with its cultivated fields but plots in a dreary waste of heath and moorland, this number is remarkable, and I fondly hope, if future years see additions to their number, that I may be the fortunate contributor.

4th December, 1885.

Mr BARBOUR, Vice-President, in the Chair. Thirty-six members present.

Donations.—Mr Rutherford presented two photographs of places visited at the Summer Excursions. The Secretary laid on the table Part II. of the Transactions of the Huddersfield Natural History Society, also three engravings of the Ruthwell Cross as a donation from Mr Black.

Exhibits.—Mr T. Brown exhibited a case of Birds' Eggs. The Secretary exhibited a Hydra (*Hydra viride*) and the Sea Mouse (*Aphrodite aculeata*), and briefly described them.

COMMUNICATIONS.

I. *A List of the Birds of Tynron Parish.*

By Mr T. BROWN.

It was rather reluctantly that I consented to read a paper to our Society, not from any unwillingness to serve it, but because I did not consider that I had studied any subject sufficiently to make a paper interesting. The Secretary would not be said nay, however, so I have prepared a list of the birds of Tynron, with remarks on some of them. On the table is a specimen of each bird's egg, excepting the Short-eared Owl, Barn Owl, Redwing, Marsh Tit, and Goldfinch. Where the eggs of any species vary much, there are two or more. I purpose giving first those birds that have been known to nest in the parish, then those that have not. The list contains 86 birds, very nearly a quarter of those on the British list, which is rather a large number, considering the size of the parish; but the variety in the ground may account for this, the upper part being bare moorland and the lower part well wooded and chiefly cultivated land. Birds that frequent water are poorly represented, there being nothing worthy of the name of a loch. Probably the list is not complete, as last summer I found two birds nesting of which I was not previously aware.

The first bird on the list is the *Merlin*, which is rare. A pair nested for many years on the steep heathery slope of a wild mountain glen, but they have not been seen since 1883. The *Kestrel* is yearly becoming less numerous, still a few pairs breed, generally on ledges of the rocks. The *Sparrow Hawk* is rare, and its nest has not been seen for a year or two. Fifteen or twenty years ago their nests were common. Occasionally the common

Buzzard is seen, sometimes at a great height, sailing slowly and gracefully in circles—at other times hunting along the hillsides. The grouse appear to be very much afraid of this bird, as, on two occasions, when one crossed the valley to the opposite hill they seemed to clear off it altogether in the wildest manner. A pair of buzzards nested until three or four years ago on a rock on the farm of Appin, but they have not returned since their young were taken from the nest by some labourers, who had been working in the district. It seems a great pity that such fine birds as the hawks should be persecuted as they are. The harm which the larger ones would do to game would be but trifling, while some of the smaller ones feed largely on vermin. The *Tawny Owl* is common in the wooded parts, nesting occasionally in a hole in the ground, but more frequently in hollow trees. Books on British birds give the number of its eggs as from three to five, but although not a season has passed for a long time without my knowing of one or more nests, I never saw more than three, and in four cases out of five, not more than two eggs. The *Long-eared Owl* is rare. It evidently lays its eggs in pairs, at a considerable interval, as in a nest of four found recently two were almost hatched, while the other two were not more than half. From the situation of a nest (amongst heather) found many years ago, it must have been that of the *Short-eared Owl*, the only instance of its occurrence. But once has the nest of the *Barn Owl* been observed, in a rabbit-hole. The female was wantonly shot. The *Spotted Flycatcher* is plentiful. On all the streams the *Dipper* is found. This bird sticks very closely to the same nesting site, there being several places, generally by a water-fall, which are never without a nest. The same nest is used year after year, if not carried away by floods. The moss of which the outer part is composed, being gathered fresh from the stones by the burns, frequently grows, when the situation is a damp one, forming a dense water-proof covering for the lining of grass, the only part which seems to require annual repair. There are almost invariably four or five dry oak leaves as an inner lining. The eggs of a pair of Dippers were taken last year, and the birds laid a second time in the same nest, a very unusual occurrence, not, however, until they had another a few hundred yards from the first almost completed, when it was swept away by a swell in the river. They evidently considered that time would not permit of their building

a third nest ; so they returned to the first, where they reared their brood in safety. The *Missel Thrush*, almost the earliest songster, is common. On one occasion I saw a pair of these birds attack a hen that was passing near their nest. It was only this season that the *Song Thrush* appeared in anything like the numbers in which it was found previously to the severe winter of 1879-1880. The *Blackbird* is plentiful, too plentiful, we think, during the fruit season. The *Ring Ouzel* is found on all the hills building its nest, which is very like the blackbird's, amongst the heather, in the ivy which clings to some of the rocks, or in juniper bushes. The *Hedge Sparrow*, whose nest, owing probably to the beautiful colour of the eggs, is robbed so often by boys, is common. That bird, which is a general favourite, in spite of its pugnacity, the *Robin*, is very common. No other bird becomes so familiar with our dwellings. Some time ago one began to come into our house, by and bye getting to spend the whole day indoors, entering in the morning before there was much light, and remaining until quite dusk, never, however, overnight. During the cheese-making season its headquarters were in the dairy, when it fed on the curd. When the supply failed there, it betook itself to the kitchen, clearing up the crumbs from the table and floor after meals, or baking operations. Its favourite perch was the edge of a pan which hung from the ceiling, where it sat and sang for hours daily. Any noise in the house, particularly the scrubbing of the floor, never failed to set robin a-singing. On washing day it was sure to be found in the midst of the hubbub, walking about amongst the tubs and people quite at home, and singing all the time—sometimes in a low, sweet strain scarcely audible, at other times quite loudly. It never seemed at ease when one of the male sex approached. Suddenly it disappeared, to our sorrow, probably having fallen a prey to a cat, the end to which more pet birds than that robin have come. The *Redstart*, *Whinchat*, and *Wheatear* are all common. There is rather a remarkable Redstart's egg on the table, having a few spots at the larger end. The nest of the Wheatear is very difficult to find, partly on account of the prevalence of stone dykes, which form their favourite nesting site. Occasionally they take to a rabbit hole. Both the *Whitethroat* and *Garden Warbler* are numerous, particularly the former. A pair of *Blackcap Warblers* nested in 1883 and 1884 in one of our wooded glens, but last year they

were not observed. The song of this bird is very loud and clear. The *Wood Warbler* and *Willow Warbler* are abundant, the former having increased in numbers greatly during the last dozen years. When Macgillivray wrote it was not recorded from the north of Scotland, but in June of 1883 I heard numbers of Wood Warblers about Balmacarra, and all along the wooded banks of the Caledonian Canal, from Inverness southwards. There is almost no doubt but that the *Chiff' Chaff'* visits the parish, but I have not seen its nest, and cannot distinguish the bird from the Willow Warbler. Numbers of the *Golden-crested Wren* are found in the woods, particularly where there are pines. That very active little bird the *Wren* is plentiful. It is a pugnacious little fellow. One day, when the ground was covered with snow, I observed two fighting, rolling about until quite draggled, and so fatigued that they could hardly fly away. It adapts the exterior of its nest beautifully to the surroundings. Two of which I knew last year could not have been detected but for the small hole in the side. One was in a clump of withered fern, and composed chiefly of the same material. The other was against the trunk of a moss-covered ash tree. The birds had got under the moss, raising it sufficiently from the stem to allow of their making the nest completely underneath it. The *Tree Creeper*, whose bill is so admirably adapted for securing its food from underneath the bark, is not rare. The *Great Tit*, *Blue Tit*, *Coal Tit*, and *Long-tailed Tit* are all common, especially the two first. I saw a proof of the strength of the Great Tit's bill on one occasion when it picked up a grain of Indian corn, with which it flew to a tree. After pecking at it for some time the corn was dropped, and on examination was found to have a considerable hole in it. *Pied* and *Grey Wagtails* are common. The *Tree Pipit*, whose eggs are said to vary more than almost any other British bird, is abundant. The *Meadow Pipit* is by far the most numerous of the small birds in the parish. A few pairs of *Sky Larks* are found on most of the hills (generally near the top) during the spring and summer months. Their song is one of the sweetest, and rendered particularly charming under the circumstances in which we often hear it on the Tynron hills. The duties of those who have charge of sheep lead them, during the latter part of April and first half of May, to be on the hills by daybreak, and with a fine morning, the air of the freshest, the sun rising gloriously in the east, a view stretching to Criffel, the

Solway, and the English hills, and the song of several larks overhead, no one who has any love of nature can fail to be enchanted. The *Yellow Hammer* is not uncommon. The *Chaffinch*, which builds such a neat nest, comes next, in point of numbers, to the *Meadow Pipit*. After reading White's "Natural History of Selborne," in which he states that the male and female Chaffinches separate during winter into different flocks, I noted those in our district, and found that at least nine out of ten were males. Two nests of this bird were observed in the end of April last, quite ready for eggs. They were frequently examined, and set down in the end as forsaken nests. On June 9th, however, they were found to contain four eggs each, quite fresh in one, almost quite fresh in the other. The change in the weather must account for this, April being mild, while May was remarkably cold throughout. The *House Sparrow* is abundant. The *Greenfinch* is not very common. The *Goldfinch* is very rare, and known only once to nest. The *Lesser Redpoll* and *Linnet* are met with in considerable flocks during winter. A few pairs remain to breed, and the number of Redpolls which do so has increased considerably during the last two years. The *Bullfinch* is not uncommon. A few pairs of *Starlings* nest regularly, besides those that are accommodated in boxes, put up for the purpose. The *Carrion Crow*, which is not a favourite, is common. Unlike the rook, it gathers the sticks to make its nest from the ground, using "heather birns" exclusively, lining with a plentiful supply of wool. It destroys great numbers of eggs, chiefly those of the Red Grouse, and also occasionally attacks weakly lambs. A few years ago I found a lamb with both eyes and its tongue picked out and still alive. There are several rookeries in the parish, chiefly in the valley of the Shinnell, but in some of them the Rooks are very much persecuted. In the end of April, 1884, a pair commenced to build their nest at Auchenhessnane; probably they were banished from a rookery for misbehaviour. They were allowed to rear their young, and this year there were ten or twelve nests. It is very interesting to watch them during the nesting season. I never saw a Rook take a stick for its nest from the ground. They invariably break them from the trees, not even condescending to pick up those that they accidentally drop. The greater part of the twigs were taken from larches, which had several dead branches, and were consequently easily broken, but occasionally they went to ashes and birches. They showed a

good deal of calculation when they chanced to secure a stick in the middle of a tree, hopping backwards and forwards among the branches until they came opposite an opening sufficiently wide to admit of their exit. When they want to ascend to their nest they generally do it by a spiral flight. The most difficult part of their building is the laying of the first two or three sticks. They try to balance them very carefully, still, in some instances, depending on the fork they have chosen, they fall time after time. After the first few sticks lie securely the building is an easy matter. The lining is entirely of grass, and they do not complete the exterior before putting in the lining, but keep adding to the height of the nest as they line it. That "honesty is the best policy" is certainly not the Rook's motto. They are, without exception, notorious thieves. No sooner do a pair leave their nest for fresh materials than three or four are in it, tearing it to pieces, evidently, from their hurried manner, quite aware that it may be advisable that the owners should not find them there on their return. Two of the nests were repeatedly attacked by most of the Rooks, but, owing probably to the smallness of the rookery, and certainly partly to the brave defence of the owners, they withstood the attacks. In each case there were three Rooks connected with the nest. One was kept at an outside, but, whenever the other two left, entered the nest, and began some alterations. After a time one disappeared from each nest. A person could not help wondering whether Rooks were sometimes guilty of bigamy, and whether their government was not stricter than that of a certain district of North America. To us Rooks seem all very much alike, still they know each other at a considerable distance. During incubation the female is regularly fed by the male, and I observed that when returning to the rookery with food their partners always recognised them at a distance of a hundred yards or more. Keepers were sent to destroy the Rooks, and shot as many of the birds as they could, pulled down what nests they could reach, and fired several shots through those they could not, hoping to break the eggs. In this they did not succeed, and the birds returned to some of the nests after having been kept off for about twenty-four hours. Although the weather was wet and rather cold, and in two of the nests at least the eggs were almost hatched, the young birds came out all right, but the eggs that were sat upon two or three days before any of the others were not the first hatched. These birds appear to

have a fair memory. Last week a bit of bread fell at my feet, which had been accidentally dropped by a passing Rook. I stood near the bread for some time to see whether the bird would remember to return for it, which it did directly on my leaving. The *Jackdaw* is common, but few nest. The *Magpie* is not often seen. On one occasion I heard a hare screaming piteously, and a short search proved the cause of it to be that it was attacked by two Magpies. The hare, which was scarcely half-grown, was released, but its screams were soon heard again, and doubtless the birds in the end had a meal of it. It was considerably torn on both sides of the head. The *Cuckoo* is common. I have twice seen its egg. The first time it was in a Tree Pipit's nest, and shortly after the eggs were hatched the young Pipits were found turned out. They were replaced, but next day were out again, and all dead. The second time it was in the nest of a Yellow Hammer, but the lawful occupants were not turned out as on the former occasion. This is not so surprising when it is known that that cuckoo egg is now on the table before you. The following are the dates on which the Cuckoo arrived for the last ten years:—1876, April 30th; 1877, April 28th; 1878, May 1st; 1879, April 29th; 1880, May 5th; 1881, May 3d; 1882, April 23d; 1883, April 21st; 1884, May 7th; 1885, April 27th. There is a difference of 16 days between its earliest arrival in 1883 and its latest in 1884. It, like all other migrants, arrives during the night. Both the *Swallow* and *House Martin* are common. This year the Martins, from the same cause probably that affected the Chaffinches, left, for a week or ten days, the morning after their arrival. The *Wood Pigeon* is not numerous, still met with in all the woods. The nest of the *Stock Dove* was once observed, some years ago, under an overhanging bank. The *Pheasant*, *Black Grouse*, and *Red Grouse* are all plentiful. The *Partridge* is common. The *Golden Plover*, whose nest, partly from the cunning of the bird and partly from the colour of the eggs, is so very difficult to find, is met with on all the hills. The *Lapwing* is common, but not numerous. Two years ago a Lapwing was observed attacking a sheep that had come near its nest, at first by standing as erect as possible and flapping its wings in the sheep's face, then by rising on the wing and making repeated dashes at its head, finally causing the astonished sheep to beat a retreat. A few pairs of the *Common Sandpiper* nest regularly on the upper reaches of the Shinnell.

The *Common Snipe* is frequently started from the marshy ground, taking its flight at first in a rapid, zigzag manner. This bird has been called the heather bleater, from the remarkable noise frequently made by the males when on the wing during the breeding season, being considered like the bleating of an old goat. I have seen it stated that it is not known how the noise is made, but Macgillvray says it is made by the quivering of their wings. They ascend high in the air, wheeling round in circles, and frequently descend for some distance very rapidly, and then ascend again to make another descent. It is always during the descent (which they perform with half-closed and apparently motionless wings) that the noise is heard. The *Curlew* is abundant. There was in 1884 what appeared to be an instance of a pair of Curlews trying to remove their eggs because their nest had been found. The eggs were at some distance from the nest, in a shallow drain, out of which the birds seemed to have been unable to roll them. They were replaced in the nest, but the parents never returned to it. The *Land Rail* is not very common, and has decreased in numbers considerably within the last few years. A few pairs of *Moor Hens* inhabit the streams. The *Wild Ducks* are seldom seen, except when frost has sealed up the lochs and rivers, when they take to the mountain springs. The following are not known to nest in the parish:—The *Peregrine Falcon*, seen only once. It appears that the *Pied Flycatcher* has not been recorded from the south-west of Scotland until 1884. On May 13th, by the side of the Scar, I heard a bird whose note was not familiar to me, but resembled that of the Redstart. It proved to be the Pied Flycatcher, a bird which could not, from the conspicuous colour of the male, be in the district without being observed. The pair built a nest, composed entirely of withered grass, the finest being used as a lining, in a hole in an alder tree, about 18 inches from the entrance, in which on May 30th were six eggs of a paler blue than the Redstart's. One was taken as a specimen, four were hatched, and the remaining one contained a half-formed bird. The pair returned this season to the same place, but only three eggs were laid. It is rather strange that none of their young returned to the district. The nest was on the Penpont side of the Scar, but once or twice the birds were seen in our parish. The *Redwing* and *Fieldfare* are met with in considerable flocks. The former was about the first bird to succumb during the winter of 1879-1880. The *Stonechat*

is very rare. The *Sedge Warbler* must pass through the parish, although I have not seen it. It seems that there is no authentic record of the *Marsh Tits* having been found in either Dumfriesshire or Kirkcudbrightshire, but twice last winter a pair were observed along with Coal and Longtailed Tits. *Snow Buntings* are seen every winter, occasionally in large flocks, but more frequently only two or three together. The *Black-headed Bunting* is rare. About most farm-yards one or two *Bramblings* are found, and very rarely a large flock is seen in the fields. Great numbers of *Twites* frequent the lower ground, particularly fields in which *Prunella vulgaris* abounds. Now and then the croak of the *Raven* is heard as it sails slowly along the hills. The *Sand Martin* and *Swift* are not common. The *Woodcock* is not plentiful. A pair were seen in the end of April last, which probably remained to breed, as it would appear their nests are found much more frequently of late years, and gradually extending southwards. I had frequent opportunities of seeing this bird carry its young to feeding ground on the west coast of Argyllshire. During the month of June numbers were to be seen every evening, from ten to eleven o'clock, leaving the woods for marshy ground, with their legs hanging down to their full length and their young clasped between their feet. The *Heron* frequents all the streams. The *Teal* is very rare. The *Black-headed Gull* is abundant. From one to three *Great Black-backed Gulls* are seen occasionally about the hills during the spring months when carrion is plentiful. There is in Dr Grierson's Museum in Thornhill a specimen of the *Golden Oriole* shot in the parish of Tynron some thirty years ago.

II. Notes on Local Ornithology for 1885. By Mr W. HASTINGS.

There is little to note this year regarding anything in the British bird line that can properly be called rare, so far as my observation has gone, although several specimens have been forwarded to me for preservation that are not commonly met with in this district. There was a great scarcity of the *Martin* and *Swift* this year, which usually visit us every summer in considerable numbers. On the other hand, the *Sand Martin* was more than usually plentiful. The *Cuckoo*, too, was more than usually frequent. A great number of them was sent to me from different parts of the country, the majority of them being young birds of this year. In the month of June I had a young *Woodcock* sent

me; it would be about two weeks old, and was the first I ever had bred in this country. It was from the Galloway side. More than twenty years ago, I had two eggs of the Woodcock sent me also from Galloway; these were deposited in the Observatory Museum. Although this bird does not generally remain here to breed, I have been informed that odd pairs have been met with from time to time in various parts of the country, that had remained here and brought up their young. It leaves here in the early months of spring for the north of Europe, and returns about the month of October to spend the winter with us. I have had only one specimen this winter as yet. In the month of October I had a nice specimen of the *Ruff* brought me. It was shot in Carlaverock, and of course was in the winter plumage, and had not the large frill on the neck, which comes on in the spring, when it is in full dress. I have had only one other specimen of the *Ruff* shot in the district. It was shot in the neighbourhood of Lochfoot. It is now in the Kirkcudbright Museum. I have also had a specimen of the *Reeve*, or female, shot in this district. The *Ruff* used to be not uncommon in some parts of England, especially in the Fens of Lincolnshire, but I am informed they are not common there now, as the Fens have been drained to a large extent, and are not so suitable to the habits of the *Ruff* as they were formerly. In the month of October I received a nice specimen of the *Quail*, shot in the district. It is very seldom that I have had it. The only one that ever I saw alive I put up in a field in the neighbourhood of Auchencairn, a good many years ago. Some fifteen years ago a pair frequented the fields in the neighbourhood of Barkerlands all the summer. Although I never saw them I often heard them about the gloaming. Their cry resembles the words, "wee mi feet," often repeated. In September last I received a very curious specimen of the *Grouse Hen*. She is of a uniform grey colour all over. I never saw another specimen of the *Grouse* anything like her. I have also had several *Kestrel Hawks* of a very unusual colour, approaching to white, whereas the usual colour is reddish or reddish-brown. Last month I received a specimen of the *Green Woodpecker* (*Picus Viridis*, L.) I could not say where it was shot, but it was newly killed when I received it, for it was quite fresh. I have had it sent me from England and Wales, but never had one that I knew was shot in this district. In the beginning of September I had a curious

specimen of a *Duck* sent me. It was of the Pochard class, but unlike any other I ever had. It was of a uniform dull brown, approaching to black on the back and wings—the wings without any beauty spot; the breast and belly of a dull or dirty white; crown of the head dark brown, like the back; cheeks whitish; dark line from the nape down the whole length of the neck; the legs short; feet large; webs black; bill moderate size, and of a dark colour. I thought when I received it that it was the female Scaup Duck, but upon examination I found that it was not that at all. I can find no description of it in any work on Natural History that I have or have had access to, so I conclude that it is a stranger, and is not found in the list of British birds. I have also had several specimens of the *Gannet* or *Solan Goose* sent me from various parts of the country; one procured a long way inland. They are regular sea birds, and splendid fishers. The nearest breeding place for them is Ailsa Craig, in the Firth of Clyde; and they also breed in great numbers on the Bass Rock, in the Firth of Forth. I am of opinion that the specimens which I received are old birds that have lived their natural time, and were dying of old age, as the most of them were pucked-up in a sickly or dying condition. There is a great increase in the number of small birds generally in our neighbourhood, which had been sadly thinned by the severe winter we had some five years ago.

III. *The Ruthwell Cross.* By Mr G. F. BLACK.

The Cross which forms the subject of this paper stands within the manse garden at Ruthwell, in Annandale, about ten miles from Dumfries. As it stands at present the Cross is reconstructed, it having been found in fragments and pieced together by the late Rev. Dr Henry Duncan, minister of the parish. The extreme length of the Cross is about $17\frac{1}{2}$ feet, of which rather more than 2 feet is embedded in the earth. The shaft is 2 feet in breadth at the base, and 15 inches in thickness. The material is a reddish, or rather a reddish-grey sandstone, probably quarried from the neighbouring hills. The Cross stood in the old church of Ruthwell till 1642, when it was ordered to be destroyed, as a monument of Pagan idolatry, by an order of the General Assembly of the Presbyterian Church of Scotland, which met at St. Andrews on the 27th July, 1642. The column was accordingly thrown down and broken in several pieces, and left lying

on the floor of the church till some time after 1772, when the various pieces were removed into the churchyard in consequence of alterations in the church. In 1802, Dr Duncan finding that it was exposed to injury in the churchyard, had the various fragments pieced together and erected in their present position. Previous to this, however, a portion of the top of the Cross was found in digging a grave to an unusual depth; but the transverse arms are still wanting, those now on the monument having been supplied by Dr Duncan in 1823—"a circumstance," says Fin Magnusen, "which should carefully be kept in mind by all who in future may have occasion to inspect the monument itself, or drawings of it."¹ The broad faces of the Cross are sculptured with Scriptural subjects in relief, and on the sides with scroll-work, also in relief, representing a vine, with birds and beasts on its branches and eating of its fruit. "This was a common representation," say Dr Anderson,"² "on Christian monuments, and examples occur at Jedburgh, and on the elaborately sculptured monuments of Celtic character at Hilton of Cadboll, and Tarbet in Ross." This species of ornamentation occurs also on the Bewcastle pillar, and is a strong proof that they are of the same period, and, indeed, they are supposed to have been sculptured by the same person. The figure subjects on the broad faces of the Ruthwell monument are arranged in panels surrounded with flat borders, on which are engraved the inscriptions which give to this monument its special interest. They are in two alphabets, and in two languages—one set being carved in Roman capitals and the other in Runes. The inscriptions in Roman capitals are in the Latin language, and the Runic inscriptions in the Northumbrian or Anglian dialect of the Anglo-Saxon.

Beginning at the base on the north side of the monument, we have a plain Latin cross with the symbols of the sun and moon on each side.³ Immediately above is a panel containing the annunciation: the Angel Gabriel appearing unto Mary, with the words "INGRESSVS ANGELVS" — "The angel having entered"

¹ "Report of the Royal Society of Northern Antiquaries," 1836, pp. 86-7.

² "Scotland in Early Christian Times," 2d series, p. 233. I am indebted to Dr Anderson's book for a few of the above remarks.

³ According to Dr Duncan, this Cross is "a representation of the Crucifixion, much defaced. Along with our Saviour, the two crucified thieves seem to have been sculptured, and an orb, probably indicating the darkening sun." This statement is certainly wrong; there is no trace of any sculpturing on the face of the Cross, and besides there are distinct traces of *two* orbs, one on each side, which certainly must represent the sun and moon. The symbols occur several times on sculptured stones of the Christian period.

(Vulg. S. Luke i. 28). The remainder of the passage is illegible. The next subject is "Jesus healing the man that was born blind:" "ET PRAETERIENS [IESVS] VIDIT [HOMINEM CAECVM] A NATIVITATE ET S[ANAVIT EVM A]B INFIRMITA [TE]"⁴ — "And Jesus passing, saw a man blind from his birth, and healed him from his infirmity" (St. John ix. 1 et seq.) The next panel above contains a representation of Mary Magdalene anointing the feet of the Saviour: "ATTVLIT ALABASTRVM VNGVENTI ET STANS RETRO SECVS PEDES EIVS LACRIMIS COEPIT RIGARE PEDES EIVS ET CAPILLIS CAPITIS SVI TERGEBAT"—"She brought an alabaster vase of ointment, and standing behind, with tears began to wash His feet, and with the hair of her head did dry them" (St. Luke vii. 37-8). On the Gosforth Cross, Cumberland, she is represented as carrying her vase of ointment, which, though particularly mentioned, is not shown on the Ruthwell monument.⁵ Above this panel is the salutation of Mary and Elizabeth. The inscription is too much obliterated to be read, but there can be no doubt that it is a quotation from the Vulgate relating to the subject as in the other cases. Again, where the stone curves inwards to the crossbeam, there is an archer pointing his arrow upwards. I am not sure what it means. Possibly it may represent the sign of the Zodiac Sagittarius, which is a common feature in ancient sculpture. The arms being modern, we may pass them by and proceed to the top stone—the most interesting portion of the whole monument, as bearing the name of the immortal author—Cadmon,⁶ the Milton of ancient England. This face of the top stone bears the figures of St. John and his eagle, with the opening words of his gospel, "IN PRINCIPIO ERAT VERBUM." We turn now to the southern side. The first panel, corresponding to the one on the northern side containing the Latin cross, appears to have contained two human figures, but they are too much obliterated to be made out. The second panel contains "The Flight into Egypt," considerably mutilated, but showing the words—"MARIA ET IO[SEPH]," "Mary and Joseph," round the margin. The next panel contains a subject from Jerome's "Life of St. Anthony." The reference is to the incident in the legendary life of St. Anthony, who for sixty years

⁴ The words and letters within brackets are not now on the Cross, and are supplied from the Vulgate. The words *et sanavit eum ab infirmitate* are not in the Vulgate.

⁵ "Memoires de la Societè Royale des Antiquaries du Nord," 1834, p. 16.

⁶ I prefer to spell this name *Cadmon* instead of *Cædmon*, as the former is the original Northumbrian form.

was fed by a raven, that brought him a loaf daily, which, on the occasion of St. Paul's visit, they shared between them. The inscription is imperfect, but reads:—"SCS PAVLVS ET A[NTONIVS EREMITAE] FREGER[VN]T PANEM IN DESERTO—"St. Paul and St. Anthony, hermits, broke their loaf in the desert." The central panel on this side is the most important as containing a representation of the Saviour himself in the usual attitude of benediction, and bearing a scroll (the sacred volume) in his left hand. He is here represented, as on the Bewcastle Cross, treading on two swine; while on other early crosses He is frequently shown treading on a worm or a dragon. The inscription is taken from the Apocryphal Gospel of the Nativity, and reads:—"IHS XPS IVDEX AEQVITATIS SERTO SALVATOREM MVNDI BESTIAE ET DRACONES COGNOVERVNT IN DE[SERTO]"⁷:—"Jesus Christ, the Judge of Righteousness: Beasts and dragons knew in the desert the Saviour of the world." Above this panel is another containing the figure of John the Baptist standing on two globes, bearing the *Agnus Dei* on his breast. The only word now legible of the inscription which surrounded this panel is "[A]DORAMVS"—"We adore." The next panel, corresponding to the one on the other side containing the archer, represents two figures face to face, but the subject is doubtful. The top stone on this side contains a bird perched on the last spray of the vine—representing the Dove of Peace. But it is the inscription on the raised border which is of supreme interest—more so than any other part of the monument, from its containing the name of the author of the poem. Professor Stephens, of Copenhagen, has read the inscription as CADMON ME FÆUOTHO = CADMON ME MADE.

As these three words have given rise to so much controversy in the literary world, it is much to be regretted that they cannot now be accurately read on the Cross, as Cardonnel's plate is very inaccurate in this part. I shall say no more about this part till we come to deal with the Runic inscriptions, after describing the scroll ornamentation. And here I cannot do better than quote the words of Dr Anderson in his lecture on the Cross. He says:—"The sculptures on these narrow sides, instead of being figure-subjects in panels, as on the broad faces of the Cross, are running

⁷ The part of the word *deserto* here placed within brackets has been misplaced by the carver of the inscription. Dr Duncan wrongly translated this inscription as follows:—"Jesus Christ the Judge of righteousness—Him assuredly to be the Saviour of the world, beast and dragons knew from thence."

scrolls, each representing a vine with its branches alternately recurved, and bearing grapes in symmetrical clusters, a bird or beast lodging in each of the branches and feeding on the fruit. The vine is the most ancient subject of Christian art. It appears in the Catacombs, treated with all the grace and freedom of classic naturalism both in painting and sculpture. The Byzantine formalism reduced it to a mere running scroll, and in this conventional form it always appears on the monuments of this country, sometimes with and sometimes without the adjunct of the birds and beasts lodging in the branches."

The Runic inscriptions which are incised on the raised borders surrounding the scroll work on the two sides of the Cross are in the older variety of alphabet known as the Anglo-Saxon, which consisted of upwards of forty letters, and in which seem to have been embraced, more nearly than in any modern alphabet, the actual sounds of a language.

"The inscription is arranged in vertical columns on either side of the panel of scroll work, extending from the top to the bottom of the narrow sides of the shaft of the Cross, with the exception of the first line, which runs horizontally across the top of the panel. Consequently it reads from left to right, across the first line in the usual way, then continues in a vertical line down the whole of the right hand border, returning to the top of the left hand border, and reading vertically again to the base. As the lower part of the Cross is more wasted than the upper, there are places where the reading fails towards the bottom of each border, thus making four gaps in the continuity of the inscription."

We come now to the story of the translation of the Runes, "which is in the highest degree interesting and instructive." The first who attempted to read the inscription was Mr Thorleif Gudmunsen Repp, a learned Icelfander and sub-librarian of the Advocates' Library. He assumed the language to be a mixture of Icelandic and Anglo-Saxon, and translated accordingly. The value of his translation may be judged from the following. The lines which are now rendered—

" Christ was on Rood,
 Whether there readily
 From afar there came
 The Prince to aid
 . . .
 Sore I was
 With sorrow troubled," &c.

were made by Mr Repp to mean that "a baptismal font with ornaments of eleven pounds weight was offered by authority of the Therfusian fathers for the devastation of the fields, and thirteen cows as an expiation for an injury." From other parts of the inscription he supplied the names of the devastated locality, "the dale of Ashlafir," a place that had no more historical existence than its holy conservators, the Therfusian fathers! The next scholar who attempted to unravel the inscription was the learned Professor Fin Magnusen, author of numerous works bearing on the language and literature of the Scandinavian peoples, but wholly unqualified to deal with an inscription of this kind in a language of which he was ignorant. Nevertheless he attempted it, and his paper may be found spread over 108 closely printed pages of the "Report addressed by the Royal Society of Northern Antiquaries to its British and American Members." He agreed with Mr Repp in regarding the language as a mixture of Icelandic and Anglo-Saxon, but differed *toto cælo* from him in his translation. He based his reading on a wonderful engraving which he designates the "Thorkehin Engraving," and which turns out to be nothing more than the plate engraved by the Scottish artist, Adam de Cardonnel, for the "Vetusta Monumenta," a work published by the Society of Antiquaries of London in 1789. The words "Cadmon me fœuotho," Prof. Magnusen transformed into "Offa, Voden's Kinsman," and gives us (p. 149 of Report) his genealogy "according to the younger Edda." His translation is as follows:—"I, Offa, Voden's kinsman, transfer to Eska's descendant, to you two the property, field, meadow give we Ashlof! The words of the noble I below make known. To Erinc young promised she riches, estates good, I for the marriage feast prepare in the meantime. 'Received he now,'—the noble spoke,—'the gift, and aye preside in the hall over the guests! I have magnanimity, I bring rings (riches) . . . These three estates Erincred possesses. Christ was among——when to all we gave all that they owned—the married pair; At their home, the rich woman's, you were a guest, their down-dwelling — — Give every — — The advice is willing (*i.e.*, willingly given). Back spoliation, if yet living on earth! Well the Etheling possesses now me this property. Saw I us my Son! Every where again rule!" Matters were in this condition when in 1838 the attention of Mr J. M. Kemble, a distinguished Anglo-Saxon scholar, having been turned to its decipherment, the true meaning

of the inscription was ascertained. In a paper on "Anglo-Saxon Runes" (published in the "Archæologia," vol. xxviii.), Mr Kemble demonstrated that the language of the inscription was Anglo-Saxon, and its construction rhythmical. He showed that the inscription began with the words "Christ was on the Rood," and was a poetical description of the passion of the Saviour. Two or three years afterwards Mr Kemble had the pleasure of seeing the entire poem, consisting of 310 lines, in their southern English dress, on their being published from an old English manuscript at Vercelli, now known as the *Vercelli codex*. As a proof of the accuracy of his translation, it may be mentioned that after examining the South English copy he had only three words of his translation to correct. The *Vercelli codex* was discovered by a German, Dr Blume, in the library of the Convent at Vercelli, and was copied by Mr B. Thorpe, the eminent Anglo-Saxon scholar, who was sent out by the Record Commission for that purpose. The *codex* contains six poems, namely—1, "A Legend of St. Andrew;" 2, "The Fortunes of the Twelve Apostles;" 3, "The Departed Soul's Address to the Body;" 4, "A Fragment, Moral and Religious;" 5, "A Dream of the Holy Rood;" 6, "Elene, or the Invention of the Cross." The poems were printed under the editorship of Mr Thorpe, in a volume known as "Appendix to Mr Cooper's Report on Fœdera," Appendix B.

The poem represents the sleeping Christian suddenly awakened by the vision of the Cross, which appears in the sky guarded by angels, and manifesting, by various changes, its sympathy in the sufferings of the Redeemer. At length, being endowed with speech, the Cross itself addresses the sleeper in impassioned but dignified language, and describes its feelings on being made the instrument of the sufferings of the Son of God. It is from this beautiful part of the poem that the verses have been selected for inscription in Runes on the Ruthwell Cross.

THE RUNIC INSCRIPTION.

In the first column we have—

“ On-geredæ hinæ
 God Almeyottig,
 tha he walde
 on galgu gistiga,
 modig fore
 allæ men
 bug. . . .”

“ On-girded Him,
 God Almighty,
 When he would
 On gallows mount,
 Proud before
 All men
 Bow [durst not I].”

In the second column the cross itself speaks, and says—

“ (Ahof) Ik riiknæ kyningk
 heafunæs hlafard,
 hælda ik ni darstæ,
 bismærædu unget men ba ætgadre
 ik wæs mith blodæ bistemid
 bigoten of. . . .”

“ I npraised the mighty King,
 Heaven's Lord,
 Heel (over), I durst not,
 Men reviled us both together.
 I was with blood besmeared,
 Poured from [the man's side].”

We turn now to the third column, on the other side of the monument, and there read—

“ + Krist wæs on rodi,
 hwethræ ther fusæ
 fearran kwomu
 æththilæ til anum.
 ik thæt al biheald
 sare ik wæs mith sorgum gidræfid.”

“ Christ was on Rood,
 Whither there readily,
 (Men) came from afar
 The Prince to aid—
 I that all beheld,
 Sore I was with sorrow troubled.”

The fourth column gives—

“ Mith strelum giwundæd,
 alegdun hiæ hinæ limwærignæ
 gistoddun him (æt) his likeas heafdum
 bihealdun hiæ ther heafun. . . .”

“ With missiles wounded,
 Laid they him limb-weary—
 They stood at his corpse's head,
 Beheld they there Heaven [s Lord].”

The lines here given will be found to be in close agreement with the dying words of Bede, the few English lines embedded in the Latin text, and also with the Northumbrian original of Cadmon's

hymn. In the Runes also the letter *k* occurs, which did not appear in southern English till two centuries later. The dual accusative *ungket* is extremely old, and occurs nowhere else. The *n* of the infinitive has been clipped, and the dialect is thus in close agreement with the old Norse and Frisic. In southern English the infinite ends in *an*. The *n* of the plural imperfect has also been clipped, and there is a curious softening of the guttural *h* (= *ch* in *loch*) in *celmihtig*, which is here written *almeyottig*. The word *til* (to) is unknown in southern English, but occurs in the Northumbrian original of Cadmon's hymn and in the Northumbrian Gospels. For comparison with the lines above printed, we may here give the Northumbrian original of Cadmon's hymn along with King Alfred's West Saxon version. The Northumbrian is as follows:—

“ Nu scylun hergan hefenricæs uard,
 Metudæs mæcti end his modgidanc,
 Uere uuldurfadur, sue he uundra gihuas,
 Eci dryctin, or astelidæ.
 He ærist scop ælda barnum
 Heben till hrofe, haleg scepen :
 Tha middungeard moncynnæs uard,
 Eci dryctin, æfter tiadæ
 Firum, foldu, frea allmectig.”

King Alfred's version is:—

“ Nu we sculan herian heofonrices Weard,
 Metodes mihte and his modgethonc,
 Wera Wuldorfæder ; swa he wundra gehwas,
 Ece Dryhten, ord onstealde.
 He ærest gesceop eorþan bearnum
 Heofon to hrofe, halig Scyppend ;
 Tha middangeard, moncynnes Weard,
 Ece Dryhten, æfter teode
 Firum foldan, Frea Ælmihtig.”

Translation—

“ Now shall we praise heaven-kingdom's warden,
 The Creator's might and His mind's thought,
 Of men the glorious father,—as He of every wonder,
 He, the Lord Eternal, formed the beginning.
 He first shaped for earth's bairus
 Heaven as a roof, holy Creator (“ shaper ”) ;
 Then mid-earth, mankind's Warden,
 Eternal Lord, afterwards made,
 The earth for men, Almighty Lord.”

Wanley in his catalogue of Anglo-Saxon manuscripts placed the date of the manuscript containing Cadmon's hymn in the year

737, and this early date is confirmed by the handwriting and by the close agreement of the lines with Bede's Latin prose translation, which runs thus :—

“Nunc Laudare debemus auctorem regni coelestis, potentiam Creatoris et consilium illius, facta Patris gloriae. Quomodo ille, cum sit aeternus Dens, omnium miraculorum auctor exstitit, qui primo filiis hominum coelum pro culmine tecti, dehinc terram custos humani generis omnipotens creavit.”

“CADMON ME FEUOTHŌ.”

I have already mentioned that the runes on the top stone have been interpreted “Cadmon me made,” and on this point I think there can be no doubt. Now, we only know of one Cadmon, and we know him chiefly as a poet, and we are further told by the venerable Bede that this Cadmon composed poems on “The creation of the world and the origin of the human race, and the whole story of Genesis, of Israel's departure out of Egypt and entrance into the land of promise, of many other parts of the sacred history, of the Lord's Incarnation, *Passion*, Resurrection, and Ascension into heaven, of the coming of the Holy Spirit, and the doctrine of the Apostles,” &c. Yet, notwithstanding all this, it is asserted by many scholars that the “Dream of the Rood” was not composed by Cadmon, but by another poet—Cynewulf. Thus Mr Sweet, in his “Anglo-Saxon Reader” (fourth ed., 1884), tells us that the poem was written by Cynewulf, on the strength of Cynewulf's name being introduced into another poem in the same manuscript (*Ver. cod.*), in the form of an acrostic in Runic letters! He also informs us that “The Runic inscription of the Ruthwell Cross in Dumfriesshire also gives a fragment of the poem in the old Northumbrian dialect of the seventh or eighth century.” On the other hand, Prof. Zupitza, in his “Alt und Mittelenglisches Uebungsbuch” (3d ed., Wien, 1884), gives us the Runes with the various readings, but ignores the top stone altogether, and yet he cites among his authorities the “*Vetusta Monumenta*” and Prof. Stephens' “*Runic Monuments*!” In conclusion, I cannot do better than quote the thoughtful words of Dr Anderson in his lecture on the Cross. He says—“This, then, is the story of the decipherment of the Runes on the Ruthwell Cross. I know nothing in the whole range of monumental history that surpasses it in interest. It makes us regard the monument not only as a finger-post in the history of Christian art, but as a landmark in the history of English literature. In its sculptured decorations it preserves to

us the style and quality of a very peculiar phase of early Christian art. In its associated inscriptions in the Latin language and character, it preserves to us the key which gives the explanations of other sculptured groups that have no associated inscriptions. In them also it preserves to us the very words of the texts of Scripture, of the passages from the Apocryphal gospels, and the legendary lives of the saints that were thus chosen for sculptured representation. Above all, in its Runic inscription it has preserved a fragment of one of the earliest known specimens of old English literature—a poem undoubtedly of very unusual merit. No literary monument graven on stone of such a character, or of greater importance in the history of literature, exists anywhere else. 'It is a monument of culture in the highest sense of the term. It is a monument unique of its kind, bearing witness to the existence of an artistic culture, which for its age was high, and of a literary culture which but few of the succeeding ages have greatly surpassed. It is, therefore, a monument of which the nation of whose history it forms a conspicuous part might well be proud.'

8th January, 1886.

Mr J. G. H. STARKE, Vice-President, in the Chair. Thirty-four members present.

New Members.—Dr Aitken, Inverness, and Miss Barbour, Belmont, Dumfries.

Dr Gilchrist's Death.—The Chairman intimated that since the Society had last met, their esteemed President, Dr Gilchrist, had been removed by death, and for this reason the special meeting was not held on the 18th December. He called upon Dr Grierson to move a resolution. Dr Grierson—as one who had known the late President for many years—in feeling terms moved "That this Society record in its minutes the great loss which it has sustained on the removal by death of Dr Gilchrist, and that it tenders to Mrs Gilchrist its deepest sympathy in her sore bereavement." This was seconded by the Chairman, who testified to the kindly manner and unvarying courtesy with which their late President was ever ready to assist the members, and to further the objects of the Society.

The Society's New Rooms.—The Secretary submitted a report

of the sub-committee (see Appendix) that had been appointed to make arrangements and carry out the operations in connection with the new rooms. On the motion of Mr J. Thomson, seconded by Mr Dods, the report was unanimously adopted, and the sub-committee were awarded a hearty vote of thanks for completing the undertaking so successfully, special thanks being given to Mr Barbour, Vice-President, and to Mr J. Wilson, Honorary Secretary. It was also unanimously agreed to award the Society's thanks to all the ladies and gentlemen who had contributed so liberally towards the expense.

Exhibits.—Dr Grierson exhibited a Japanese magic mirror, a black snake from South Africa, the nest of the trap-door spider, and several Indian curiosities.

Election of President.—The Chairman intimated that the committee had resolved to recommend Dr Grierson to be their President in succession to the late Dr Gilchrist, and he moved accordingly. This motion was seconded, and unanimously agreed to. Dr Grierson, in accepting office, remarked that the first meeting of the old Society consisted of Dr Gilchrist, Dr Dickson, Mr W. G. Gibson, and himself, and that as the present Society numbered over 200 members, he was much gratified by the honour conferred upon him.

COMMUNICATIONS.

I. *Galloway Place Names.* By MR J. M'KIE.

To the greater number of us many of these names convey no intelligent meaning whatever, yet we may be assured that whether they belong to parishes or farms, hills or valleys, lakes or rivers, they are never mere arbitrary sounds devoid of meaning. Though many of them may have become so obscured by the mists of antiquity, and their passage through several languages as to make them but indistinctly visible, yet they ought always to be regarded as records of the past, inviting and rewarding a careful historical research, for they often record events which history has failed to commemorate, and embalm for us the guise and fashion of speech in eras the most remote, and of language that may have long ceased to be vernacular. We owe a debt of gratitude to our semi-barbarous ancestors for the varied and beautifully descriptive names they gave to all the prominent features of the land. The Gaelic place-names in Galloway were word pictures of the country, as it appeared when first beheld by the original settlers.

In marked contrast to this is the poverty of inventive faculty evinced by the earlier settlers in America, who were not savages but civilised men, yet a large proportion of the names given by them to places are thoroughly barbarous in character, and for the most part utterly inappropriate, and accomplish very insufficiently the purpose which names are intended to fulfil. Such names as Salem, Bethel, Athens, Troy, Rome, London, Paris, Corinth, and the like, are scattered broadcast throughout the length and breadth of the land, and by their endless repetitions must be a source of great perplexity in the post-office, booking office, and schoolroom. Much may be said in favour of the names whereby the Colonists have striven to reproduce in a land of exile, the names of the beloved spots which they had left. I was much struck with this, when a few years ago I passed through that part of Canada lying between the lakes Huron and Erie, and generally known as the Huron tract. The Colonists of that district being chiefly from the South of Scotland, the familiar Galloway names were everywhere to be met with, and though many of them were inappropriate in such a level country, yet on account of their being given in memory of the old homesteads they were excusable. Not so, however, the intolerable presumption displayed by those who have ruthlessly seized upon the grand historic names of the old world, and applied them by the score to a limited number of wooden houses, a sawmill, grocery, and grog stores, which go far to make up a city in a Western forest. But from this digression to return to Galloway. A very important point in ascertaining the meaning of topographical words is to discover their ancient spelling. As the greater number of these had been spoken for ages before they were written, and when they came to be written the manner of spelling would in a great measure depend on the accent of the speaker and the ear of the writer, which accounts for the diversity that often appears in spelling the same word, though it may be nearly at the same date. I have now before me the Valuation Roll of the Stewartry of Kirkcudbright, retoured to Exchequer, 15th July, 1642. The spelling used in it makes plain the meaning of many words which modern spelling has almost completely obscured. Words being like coins, they get clipped and worn by constant use, until the legend which they bore at first becomes almost effaced. The several races who at different times held sway in Galloway, namely, the Caledonian

Gael, the Romans, the Teuton or ancient Saxon with a sprinkling of Norse, the Irish Celt, and the Anglo-Saxon, have each left some record of their history in the names they gave to the sites and surroundings where they had found a home. Whenever we attempt to make an analysis of local names we find that by far the greater number contain two component elements, one of these which in Gaelic names is generally the *prefix*, and in Teutonic names the *suffix*, in some general term meaning island, river, mountain, dwelling, or inclosure, as the case may be. The following are the Gaelic prefixes, with their English corruptions and significations, which occur most frequently throughout Galloway:—

<i>English Corruptions.</i>	<i>Gaelic Prefixes.</i>	<i>English Significations.</i>
Ach, Auch, Achen, Auchen, Auchin	Achadh, often contracted to Ach and Acha	A field
Dal	Dail	A field
May, Mach, Meath	Magh, Machair	A plain, a field
Aird, Ard	Aird, Airde, Ard	Height, lofty, elevation
Bal, Bel	Baile	A town, farm, hamlet, or home
Bar, Barra	Barr	A point, an extremity
Ben	Beinn	A mountain
Carn, Cairn	Carn	A mountain, also a monumental heap of stones
Blair	Blar	A battle, a battlefield, also a plain
Car, Com, Crum	Cam, Car, Crom	A bend, crooked, curved
Cory, Corrie, Cors	Coire	A ravine, a deep hollow
Coul, Cull	Cul	The back, a back-lying place
Craig, Craigie	Creag, Craigie, Crea-geach	A rock, a rocky place
Drum, Drym, Drem	Druim	A ridge
Down, Doon, Dum	Dun	A castle, a fort, a mound
Larg	Learg	The side of a hill, the slope of a hill, rising ground
Garv, Gar, Garron	Garhh	Rough, roughness
Glen	Gleann	A small valley
Strath	Srath	A larger valley
Kil, Killy, Kelly, Killie	Coille	A wood
Knock	Cnoc	A knoll
Loch, Lochen	Loch, Lochan	A lake, a small lake
Lag, Logan	Lag, Lagan	A hollow, a small hollow
Mon	Monadh	A hill
Tor	Torr	A conical hill
Pol	Poll	A pool, a marsh
Rie, Arie	Ruighe, Airidh	A shealing, place of summer pasture

The first to be noticed is the English corruptions of the Gaelic

Acha or *Achadh*, a field, the most common being *Auch*. There are over thirty places with this name in the Stewartry. These being often in groups make known to us where the cultivated lands of the Gael were situated, and where they have made most progress in agriculture, and thereby in civilisation. Time will only admit of a limited number in each case being given as examples:—*Auchenlairie* is from the Gaelic words, *Achadh-na-hiolarie*, and signifies, the field of the eagle, proving that eagles then frequented the adjoining cliffs; *Auchenreoch*, from *Achadh-riabhach*, meaning the grey-looking field; *Auchenloy*, from *Achadh-na-cloiche*, the field of the stone; *Auchlane*, from *Achadh-liana*, the field of the plain; *Auchengibbert*, from *Achadh-na-t-iobairt*, the field of sacrifice. This name is so clearly of heathen origin that it proves its great antiquity. The prefix *Dal*, which is from the Gaelic *Dail*, means also a field, but is not so common as the former word; *Dalquhairn*, from *Dail-u-chairn*, the field of the cairn; *Dalry*, from *Dail-righ*, the king's field; it implies also sometimes that the field is level, *Dail-reidh* meaning the level or smooth field; *Dalbeattie*, from *Dail-beithe*, the birch-tree field. The birch among the ancient Gael was used as an emblem of readiness to do a kindness. A young maiden presented her lover with a twig of birch as a sign of her acceptance of him. The Gaelic words, *Magh* and *Machair*, both signify a plain, and sometimes a field; *Machermore*, from *Machuir-mor*, the great plain; *Balmac*, from *Baile-magh*, the hamlet or home of the plain; *Tannymaas*, from *Teine-magh*, the fire field. This name is evidently of heathen origin, referring to where fires had been specially lighted to the pagan god, Bel. The next in order of the prefixes is that of *Aird*, *Airde*, or *Ard*, signifying height, high, lofty; *Ardoch*, from *Ardach*, meaning the high field; *Laird-mannoch*, evidently a corruption of *Ard-mheadhonach*, the middle height, which very aptly describes its position; *Airdrie*, from *Airde-reidh*, the smooth height, or else from *Airde-righ*, the king's height; *Bal* and *Bel*, from the Gaelic *Baile*, means not only a town or village, but also a farm, home, or dwelling; *Balgerran* comes from *Baile-gearr-an*, which means the town on the short stream; *Balcary*, from *Baile-na-carragh*, the house of or at the pointed rocks; *Balmacellellan* and *Balmaghie*, the town or dwelling-place of the M'Lellans and M'Ghies; *Bar* and *Barra*, from the Gaelic *Barr*, meaning a point, extremity, or upper part, occurs very frequently. There being more

than sixty places with this name in Galloway, it is occasionally used singly, and in its Gaelic spelling when it simply signifies uplands, but mostly as a prefix. *Bargally*, from *Barr-geal*, the white or fair point; *Bardarroch*, from *Barr-darach*, the oak wood point; *Barcaple*, from *Barr-capull*, the horses (mares) point on uplands; *Barlochan*, from *Barr-lochan*, the little lake at the point; *Ben*, the English corruption of the Gaelic *Beinn*, a mountain; *Bengairn*, from *Beinn-a-chairn*, the mountain of the cairn; *Bennan*, from *Beinn-a-nan*, the mountain of the river, which graphically describes its situation as it rises from the margin of the Ken; *Benbrock*, from *Beinn-bhroc*, the badgers' mountain; *Cairn*, from the Gaelic *Carn*, also means a mountain, and sometimes a monumental heap of stones; like *Bar*, it is sometimes used singly, but generally as a prefix; *Cairnsmuir*, from *Carn-mor*, the great cairn; *Cairnleys*, from *Carn-liath*, the grey cairn; *Blair*, from the Gaelic *Blar*, a battle, a battlefield, also a plain; *Blairinne*, from *Blar-inne*, the battle or battlefield at the water channel or river; *Blairshinnoch*, from *Blar-sionnaigh*, this may mean either the battle of the foxes, from the cunning displayed by the combatants, or the plain of the foxes; *Blairbuies*, from *Blar-buidhe*, the yellow battlefield or plain. *Car*, from the Gaelic *Cam*, *Car*, *Crom*, a bend, curved, crooked; *Carlae*, from *Car-liath*, the grey bend; *Carsmaddie*, from *Car-madadh*, the wolf's bend; *Cargen*, from *Car-eanach*, the curved or winding water. The English words *Corry*, *Corrie*, and *Currie*, all of which are from the Gaelic *Coire*, meaning a ravine or deep hollow, are frequently met with. *Corriedow*, from *Coire-dubh*, the black ravine; *Corriefeckloch*, from *Coire-fitheach-loch*, the ravens' ravine of or at the lake; *Kirriereoch*, evidently from *Coire-riabhach*, the grey looking ravine. *Coul* and *Cull*, from the Gaelic *Cul*, meaning the back or back-lying place, are of common occurrence; *Culdoch*, from *Cul-du-oich*, which means the back-lying place of the dark water, which fully describes its position in connection with the dark water of the Dee; *Culreoch*, from *Cul-riabhach*, the back-lying grey looking places. *Craig* and *Craige*, from the Gaelic *Creag*, *Craigie*, *Creagach*, meaning a rock, a rocky place, occur very frequently. It occasionally appears singly as *Craig*, but generally as a prefix. *Craigdarroch*, from *Creag-daraich*, the rock of the oak wood; *Craigshinny*, from *Creag-sionnaigh*, the foxes' rock; *Craigden*, from *Creag-dubh*, the black rock. *Drum*, from the Gaelic *Druim*, a ridge, is also of frequent occurrence;

Drummore, from *Druim-mor*, the great ridge; *Drumboy*, from *Druim-buidhe*, the yellow or aburn ridge; *Drumbeg*, from *Druim-beag*, the little ridge. *Doon*, *Dun*, *Doune*, all corruptions of the Gaelic *Dun*, which means a castle, a fort, a mound, or earthwork. It appears in several places singly as *Doon*, and *Douns*, but chiefly as a prefix. *Dunjarg*, from *Dun-dearg*, the red fort; *Dun-drennan*, from *Dun-nan-droigheann*, the fort of the thorn bushes; *Dunmuck*, from *Dun-muic*, the fort of the wild sow. *Larg*, from the Gaelic *Learg*, meaning a hill side, the slope of a hill, rising ground. This is often used singly as *Larg* and *Largs*, but also as a prefix; *Largmore*, from *Learg-mor*, the great slope or rising ground; *Largnean*, from *Learg-nan-eun*, the hill side of the birds, or abounding in birds; *Larglungle*, from *Learg-lan-liath*, the home or cultivated spot on the slopes of the grey hill. *Gar*, *Gart*, *Garrow*, corruptions of the Gaelic *Garbh*, meaning rough or roughness, appears pretty often; *Garroch*, from *Garbh-ach*, the rough field; *Garlog*, from *Garbh-lag*, the rough hollow; *Garcrogo*, from *Garbh-creagach*, the rough, rocky place. The next prefix is the very common one of *Glen*, from the Gaelic word *Glean*, which signifies a small valley; *Glenshinnoch*, from *Glean-sionnaigh*, the valley of the foxes; *Glenkil*, from *Glean-coille*, the wooded valley. It is also met with singly as *Glen* or the *Glen*. *Strath*, from the Gaelic *Srath*, means a more extensive valley than the word *Glen*, and thereby of course not near so frequent; *Strathmanna*, from *Srath-eannagh*, the valley of the marsh; *Strathmaddie*, from *Srath-madaidh*, the valley of the wolf. The next prefix is in English, *Kill*, *Killie*, and *Killy*, which are all derived from the Gaelic *Coille*, signifying a wood, a forest; *Killdow*, from *Coille-dubh*, the black wood; *Killimore*, from *Coille-mor*, the great forest; *Killigowan*, from *Coille-ghobhainn*, the blacksmith's wood; very probably because it was from where he obtained the fuel for his forge, the blacksmith being, of course, a very important personage in the remote ages, particularly in making the swords, dirks, &c., with which the Romans under Agricola, in the first century, found the Galwegians fully provided. *Knock*, from the Gaelic *Cnoc*, meaning a knoll or small hill, is very common; *Knockengarroch*, from *Cnoc-na-garbh*, the knoll of roughness; *Knockmulloch*, from *Cnoc-mulloch*, the knoll's summit; *Knocklea*, from *Cnoc-liath*, the grey knoll. *Loch* and *Lochan*, which means a lake and a small lake, are very frequent; *Lochenbreck*, from *Lochan-breac*, the

small speckled lake, probably from its abounding in trout; *Loch-fergus*, from *Loch-Feargus*, or Fergus' lake; *Lochdow*, from *Loch-dubh*, the black lake. *Lag* and *Lagan*, which signify a hollow, and a small hollow, are also general, often singly, and occasionally as a prefix; *Laganorry*, from *Lagan-airidh*, the hollow of the shealing; *Laggan-Mullan*, from *Lagan-mhuillin*, the hollow of the mill. *Mon* is an English contraction of the Gaelic *Monadh*, which means a hill; *Minniedow*, from *Monadh-dubh*, the black hill; *Minnibuie*, from *Monadh-buidhe*, the yellow or auburn hill; *Muncraig*, from *Monadh-creag*, the rocky hill. *Torr*, which means a conical hill, is used singly as *Tor*, and *Torrs*, and as a prefix—*Tormanie*, from *Torr-na-monaidh*, the conical hill of the mountain; *Torrerie*, from *Torr-airidh*, the conical hill of the shealing. The next on the list is the prefix *Pol*, from the Gaelic *Poll*, which means a pool; *Pulcree*, from *Poll-crioch*, the boundary pool; *Polmadie*, from *Poll-madaidh*, the wolf's pool; *Polvaddock*, from *Poll-feadog*, the plover's pool. The English words *Rie* and *Arie* are from the Gaelic words *Ruighe* and *Aridh*, signify a shealing, that is, the place of the summer pasture, also a dwelling at these during the summer season; *Benaire*, from *Beinn-airidh*, the shealing of the mountain; *Clauchrie*, from *Cloiche-ruigh*, the stony summer pasture; *Largirie*, from *Learg-airidh*, the summer pastures of the hill-side. Having thus given local examples of the above Gaelic prefixes, we will now turn to the Saxon suffixes, where it will be found that those which occur most frequently denote an enclosure of some kind, something hedged, walled in, or protected, which prove how intensely the Saxon race was imbued with the principles of the sacred nature of property, and how eager every man was to possess some spot he could call his own, and guard from the intrusion of every other man. Those universally recurring terminations, *ton*, *ham*, *hay*, *burgh*, *yard*, *garth*, *park*, *croft*, and *field*, all convey the notion of inclosure, or protection, of which the following are local examples:—Chapleton, Edingham, Auchenhay, Dryburgh, Clonyard, Fairgirty, Gledpark, Coopercroft, and Broadfield. There are over fifty places in the Stewartry having the suffix *ton*, which signifies a place surrounded by a hedge, or rudely fortified by a palisade. It becomes like the Gaelic *Ach*, a sort of test word, by which we are able to trace the localities where the Saxon intruders first settled among a hostile and alien race. Those places called Garleton and Borland

take their names from two classes of society among the Saxons—the former from the *ceorles* or middle class, and the latter from the *boors* or lowest class, the *thanes* being the highest. The suffixes, *bery* and *law*, mean respectively a hill, and a rising ground, examples Greenlaw, and Raeberry. *Den* and *shaw*, a wooded valley, and a wooded hill, or height, Clouden and Clatteringshaws. This latter may be taken as an instance where the meaning is greatly obscured by modern spelling. In the Valuation Roll of 1642 it is spelled Catteringshaws, which means the wooded point of the hill frequented by the wild cat. That wild cats abounded in this locality is evident from the neighbouring lands formerly being called Catbellie, wild cats being common in Galloway until after the beginning of the present century; but since they no longer prowl in that neighbourhood, or yet the wolf in *Strathmaddie*, and the badger having ceased to make his hole in *Benbrock*, the scream of the eagle being no longer heard at *Auchenlairie*, and the wild sow having deserted *Dunmuck*, the roebuck having fled from *Raeberry*, and the fox from *Knockshinny*, these together with the *ceorles* and *boors* would alike be forgotten were it not that their memory lives through their names being given to the places which they had inhabited. In concluding these remarks, I would submit that the Antiquarian Section of the Association might find congenial work in rescuing from obscurity these beautifully descriptive, yet fast waning place-names. The Natural History Section might also be induced to assist, as it would add to the interest of any floral or other specimen they picked up, if, while noting the name of the locality, they were likewise able to record how it had obtained that name.

5th February, 1886.

Dr GRIERSON, President, in the Chair. Forty-three members present.

New Members.—Dr Hunter Dryden, Dumfries; Dr Robertson, Penpont; Mr Robson, Penpont; Messrs J. Cumming, M. M'Innes, and T. C. M'Kettrick, Dumfries.

Donations.—Mr W. J. Maxwell presented on behalf of Captain Maxwell of Terregles five rare birds from New Zealand, including the ground parrot, *Stringops habroptilus*; four local birds—two

owls, a kestrel, and a golden-eye ; a stoat ; and also "A History of the Birds of New Zealand," by W. L. Buller. Major Bowden presented eleven volumes of the Philosophical Journal. The Secretary laid on the table the Transactions of the Berwickshire Naturalists' Field Club ; the Second Annual Report of the U. S. Geological Survey, as a donation from the Smithsonian Institution ; and called the attention of the meeting to the handsome clock which had been placed in the rooms as a donation from Mr J. C. McLean.

Exhibits.—The Chairman exhibited a gold coin found near Thornhill, of the reign of Robert II. Mr Wallace exhibited the small tortoise-shell butterfly, and remarked that he had found half a dozen of the species at Terreglestown during the past week.

COMMUNICATIONS.

I. *Some Practical Suggestions.* By Mr J. G. H. STARKE, Vice-President.

An interesting discussion followed the reading of this paper.

II. *At Aberdeen with the British Association.* By Mr J. SHAW.

Mr Shaw, in this paper, described the various interesting places visited by the Association, and briefly noticed some of the important scientific papers that were read at the conference.

III. *A Gossip about Lichens.* By Mr P. GRAY.

In this paper, which was illustrated by a number of specimens, the author referred to the successful investigations made by Mr M'Andrew in Galloway, and regretted that so little was known of the Lichens of Dumfriesshire. He suggested that the members should collect as many of these as possible, and forward them to Mr M'Andrew or some other authority for identification, for by so doing they would not only make themselves acquainted with these interesting plants, but further the advancement of science. Mr Gray next described the Lichens, their place in nature, their habitats, their impatience of atmospheric and other impurities, and remarked that their luxuriance was one of the tests of the healthiness of a climate. He recommended that the collectors should examine all the stone-dykes, and visit the Lochar Moss, and the woods of Dalscone, Carlaverock, and Kirk-michael. The collector of Lichens should carry a strong sharp

clasp knife, to detach those growing on trees, &c., a geological hammer and well tempered chisel to split off pieces of rocks. The specimens should be wrapped in soft paper, labelled with locality and date, and might be carried home in a satchel. He gave instructions for the drying and examination, and recommended Lindsay's Popular History of Lichens as a useful book to beginners.

5th March, 1886.

Dr GRIERSON presiding. Twenty-six members present.

Deceased Member.—On the motion of the Secretary, it was agreed to record the loss sustained by the death of Mr W. Adamson, who had taken an active part in the Society since its foundation, and who had for several years acted as Honorary Treasurer.

New Members.—Dr J. Callander, Dunscore, and Mr J. M'Veigh, Dumfries.

Donations.—The Secretary laid on the table thirteen parts of the Linnean Society's Proceedings, as a donation from W. D. Robinson-Douglas, Esq.; the Annual Report of the Bureau of Ethnology 1882-83, from the Smithsonian Institution. Mr S. Chrystie presented a collection of birds' eggs from the district.

Exhibits.—The Chairman exhibited a bronze spear-head found at Bowhouse, Carlaverock, and an old engraving of "The Pillars," a shop which stood in the corner of Bank Street and High Street. Mr Starke exhibited a number of engravings of Sir Walter Scott, some of which he remarked were very rare.

COMMUNICATIONS.

I. *A Stoic Philosopher's View of the Deity.* By Rector CHINNOCK.

The author gave an interesting account of the old Stoic school of philosophers, and submitted a *resumé* of the teachings of Epictetus in reference to the Deity.

II. *An Hour with the Old Scottish Balladists.*

By Mr W. M'DOWALL.

2nd April, 1886.

Dr GRIERSON presiding. Thirty-eight members present.

New Member.—Miss Thomson, Rosemount Terrace, Maxwelltown.

Donations.—The Secretary laid on the table the Third Annual Report of the United States Geological Survey, four parts of the Transactions of the New York Academy of Science, as donations from the Smithsonian Institution; three volumes of Transactions of the Lancashire and Cheshire Historic Society, forty-one parts of Greviella, an engraving of old Dumfries, an engraving of Dumfries about 50 years ago, three sheets of the Ordnance Survey Maps of the district, several specimens of local rocks and minerals, fragments of Roman pottery found at Carlisle, an old spur found under the foundations of the New Church, Dumfries, and a box containing specimens of lead in various stages of manufacture, as donations from Mrs Gilchrist. Mr Coles, Vice-President, presented 110 specimens of flowering plants, and, on behalf of Mr Arthur Bennett, a collection of dried plants for distribution to the members. Mr P. Stobie presented a guinea note, dated at Dumfries, 2d April, 1804.

Bust of late President.—The Chairman unveiled a bust of the late Dr Gilchrist, which had been placed on a bracket in the larger hall, under the Committee's instructions, by the artist, Mr J. W. Dods, and he laid thereon a beautiful wreath of spring flowers, remarking that these were the flowers Dr Gilchrist so much prized.

Summer Programme.—The Secretary submitted the following list of places selected by the Committee for the Field Meetings:—May—Kirkconnell woods and the sea-shore to New Abbey; June—Kirtlebridge; July—Morton Castle, Gatelawbridge Quarries, and Crichope Linn; August—Shieldhill to Lochmaben; September—Annan and district.

The Chairman intimated that he had received a proposal for a joint-excursion from the Secretary of the Scottish Natural History Club, Edinburgh. The Committee's list was agreed to, and the Committee were empowered to alter any of the preceding to meet the convenience of the Edinburgh Society, and to take part in the joint excursion.

COMMUNICATIONS.

I. *Botanical Field Notes for 1885.* By Mr J. FINGLAND.

In responding to an invitation of our Secretary to give a communication to the Society this session, it has occurred to me to offer you a resumé of a few botanical notes which were made by me during last summer. The Thornhill district of Upper Nithsdale may now be regarded as having been fairly well surveyed in regard to the general run of flowering plants, as I think the last paper from the district given by Dr A. Davidson will testify. With the exception of one or two of the more critical families of plants, any records now to come from the district must be regarded in the nature of gleanings.

The discovery of *Nitella translucens* here in 1884 induced me to make a special search for these hitherto neglected plants. With this object in view, a number of the ponds and lochs which were accessible were therefore visited by me, but in the majority of cases the value of my examinations was entirely of a negative kind. In a few others, however, I was more successful, and a second station falls to be added for this *Nitella translucens*. Morton and Closeburn are now known both to possess it. The *capillacea* variety of *Chara fragilis* occurs in Closeburn, and there remains only another species to be reported, *Nitella opuca*, which is also found in the same parish. These results, although small, might be considered encouraging, but I do not anticipate a large find in these plants, considering the limited area of loch surface which there is in the district. As there is only one species of *Characeæ* as yet recorded from Sanquhar, one would infer that they increase in a southerly direction as affecting Upper Nithsdale. Potamogetons and other aquatic plants naturally came in for a share of attention in these searches. From the cause already mentioned, which also affects the distribution of Charas, the district is not rich in Potamogetons either. I think we cannot count more than six, and one of these is a sub-species. *P. obtusifolius* seems to be more common with us than *P. crispus*. In Carices, *ampullacea* seldom misses an opportunity of appearing in any situation which might sustain it. *C. vesicularia* is not so common, and evidently prefers the western side of the valley, a preference not peculiar to it alone, but which is characteristic of some other plants. *C. disticha* has this last year been gathered on a piece of waste marsh by the Nith. Only one patch of it

has been observed. At an immature stage this *Carex* was thought to exhibit more the habit of *C. arenaria*, and it became therefore desirable for its thorough identification to procure specimens in a state of maturity. Progress was reported by an occasional visit; but when at last I went to secure the coveted specimens I found the scythe of the mower had passed over the place—perhaps had taken a wider sweep, impelled by the harder times—and in place of these Carices now being placed on the table for your inspection, they went to swell the crop of meadow hay. I hope to have better luck with it this coming season. *C. limosa* is a valuable addition to our local Carices. I gathered it in Glencairn in a situation which has every appearance of being a permanent locality for this rather rare *Carex*. A form of *Carex fulva*, gathered in the vicinity of Moniaive, which I passed on to our eminent referee, Mr Bennett of Croydon, was considered by him to be the *sterilis* variety of Syme, and which he thinks is either the same or nearly the same as *Xanthocarpus*. Perhaps the most interesting find, and which also occurs in Glencairn, is a second station in the county for the so-called *Nuphar intermedia*. It seems to very closely resemble the Sanquhar plant, and indeed is probably identically the same, as the circumstances in both cases are similar. In both places apparently they are the only form of *Nuphar* present, and in addition, the localities occur at about the same altitude, and both are in the peat formation. I submitted specimens to Mr Bennett, who believed them to be *Nuphar lutea*, var. *minor*, of the third edition of English Botany, but was not certain whether they were the *N. intermedia* of Ledebun, which he said was considered a hybrid between *N. pumila* and *N. lutea*. Mr Bennett wrote me later on that the *Nuphars* were by no means settled, that the descriptions did not fit some of the supposed *N. pumila* plants of Perth, Aberdeen, &c. He further expressed the opinion that it was only by collecting material and submitting it to Dr Caspary, who is the authority on the genus, that he could hope to see our species and varieties properly arranged. It certainly looks a unique occurrence to have two stations in the county so distinctly apart for this plant, when the nearest places it is recorded from are in East Fife and Northumberland. The only other new plants to record for the district are *Rhyncospora alba* and *Juncus supinus*, variety *fluitans*, the former from an upland moor in Closeburn and the latter from near Penpont.

In the beginning of last August I had a short tricycle run through the south of the county, which afforded me an opportunity of extending my knowledge of our flora, and also of obtaining some specimens for my herbarium. I will mention only the less common plants which came under notice. I am well aware the majority, if not all of them, will be known to Dumfries botanists, although one or two of them do not seem to have been hitherto recorded. On the shore below Glencaple very little search sufficed to reveal the delicate flowers of *Anagallis tenella*, half hidden in the wet and spongy parts of the turf, whilst close beside were the pearl-like blossoms of *Sagina nodosa*. *Cenanthe Luchenalii* was there the characteristic umbellifer. *Blysmus rufus* struggled for possession of the drier parts of the ground with considerable success. Nowhere on the shore did I notice it so abundant as there. On reaching the ruins of Carlaverock Castle, I think the most striking feature, botanically speaking, is to be seen in the moat, where the tall and handsome grass, *Glyceria aquatica*, forms the greater portion of vegetation in the outer edge of the water. The adjoining marsh was quite gay with the bright colours of *Genista tinctoria* and *Betonica officinalis*. *Curum verticillatum*, liberally intermingled, gave an air of refinement to a rather beautiful group of plants. *Carex paludosa* is tolerably plentiful here and *Cenanthe fistulosa* likewise. Further round the shore the littoral species increase, and seem fairly well represented. *Carex extensa* is common on the shore about Ruthwell, and here also I found *Carex vulpina* growing in isolated tufts by the edges of ditches or drains, which intersect the merse. Bentham remarks of this *Carex* that where it occurs in Scotland, it is chiefly a coast plant. I have an immature *Carex* taken from Lochar Moss at Racks Station a year previous, which, after comparing with this, I take to be the same species. *Salicornia herbacea* is found in the tidal portions of the shore here. A little more inland I gathered *Valerianella olitoria*, *Drosera intermedia*, and *Lycopus europæus*. In a pond close at hand were *Potamogeton crispus* and one of the *Batrachian Ranunculi*, *R. floribundus*. Another of these, *R. pellatus*, I also found in a ditch with *Sparanium simplex* and *Veronica Anagallis*. The latter plant I mention only because, although a widely distributed one, I have never seen in Upper Nithsdale, having gathered it, however, in Moffatdale. *Anchusa arvensis*, as a weed in a corn field, was gathered near the shore at Ladyhall. Any further notes were

entirely from roadside observation, which I think are to be not despised. In some highly cultivated districts the roadside may form about the only refuge for hard pressed species. *Corydalis claviculata* is not very frequently met with, but may be seen from the road between Clarencefield and Brow Well on the edge of a wood. *Galium cruciatum* bulks largely as a roadside species about Clarencefield and further south. It is scarcer in the north of the county; but probably the Sanquhar district is the only one where it is absent. *Galium Mollugo* puts in an appearance near Clarencefield, and increases in some parts of the road, especially between Dornock and Gretna. It formed a striking feature, climbing and overtopping the hedges on the wayside with its large panicles of numerous white flowers, fully expanded at that time. Some specimens grew so luxuriantly as to measure between five and six feet in length. Another plant met more frequently in passing southwards was *Poterium Sanguisorba*. Near Cummertrees *Orobanche major* was gathered, and also *Filago germanica*, which I am not sure whether to regard as native or not. In passing out of the county towards Longtown a fine display of the handsome and showy flowers of *Scabiosa arvensis* was met with, accompanied with *Daucus carota*. Near Canonbie *Impatiens Noli-me-tangere* looked like a thriving escape. Close to the town of Langholm *Vicia sylvatica* and *Carex sylvatica* could be gathered plentifully from the road. My intention was to have made some examination of Eskdale in the interest of the botanical section of our Natural History Society, but stormy and wet weather here intervened and completely stopped any field work. My leisure time being limited, I had to abandon my intentions, and leave it perhaps to some other member of this Society to provide us with records from that district.

II. *Recent Additions to the British Flora.*

By MR ARTHUR BENNETT, F.L.S.

I have taken the Seventh Edition of the London Catalogue of British Plants as my starting point, and will briefly notice some of the plants which have been recorded since its publication. Probably at no era in British Botany have so many new plants been recorded. A prediction made somewhere about 1850, in a critique of one of the later editions of Hooker's and Arnott's "Flora," proves how little such results were then thought of. The Reviewer says—"Probably few, if any, real additions remain

to be made to our Flora, so well searched a country as Britain scarcely exists, &c." How many have been made since this date? I have not thought it worth while to look up. For myself, I venture to think that even now there are many such still to be found; doubtless they will mainly occur among the less conspicuous genera—as the Carices, Junci, Aquatics, &c.—as the results I now venture to bring before you will show. There is one genus I have taken no notice of, that is, *Rubus*. In the present state of our knowledge of the Rubi, it is a difficult matter to say which are new; our plants have yet to be correlated with the German and French forms; for the German, Mr J. G. Baker, of Kew, is now publishing some notes in the "Journal of Botany." With regard to Scottish Botany, I quite believe that the fact of our Flora having been specially studied in relation to the Germanic and French Floras, has led to less work being done, than would have been, had its Flora been studied in connection with that of Scandinavia. The Flora of Scandinavia has been called "an aggressive Flora," and certainly up to this date the distribution of Arctic species upholds this view. In Lapland and Finmark you have an Arctic Flora richer than all other Arctic Floras put together. But geographical distribution, though a tempting subject, must be passed over. I propose to simply note the species which have been known longest, and give more detailed notes on the more recent.

Ranunculus ophioglossifolius.—Found by Messrs Groves in Hampshire. It has been extinct some years in the Jersey locality.

Ononis repens, L., var. *horrida* (Lange).—For some time before 1883 I was convinced that the *Ononis* of the Norfolk sand hills differed from our recognised forms, but I failed to identify it, until I came across the description of *horrida* in Wilkhomm and Lange's "Prodromus Floræ Hispanicæ," which seemed to fit it well, and Professor Lange confirmed on my sending him specimens. It occurs also in Suffolk. The typical form also occurs in Cornwall and elsewhere. It is one of the old plants of Ray that had fallen out of notice.

Hieracium Norvegicum (Fries).—Found only last year (1885) by my friend Mr F. J. Hanbury on the north coast of Caithness. Other specimens gathered by Mr Hanbury in Caithness are considered near *H. oreodes* F. by Mr Baker, but by Dr Almquist as rather to represent a form of *Norvegicum*.

Hieracium saxifragum (Fries).—Grey Marc's Tail, Dumfriesshire, collected by J. Backhouse, I think, about 1850 or 1851. Mr Backhouse sent this specimen to my friend Mr Hanbury, and we took it to Kew on Saturday (27th March, 1886), and compared it with Fries' Herbarium Normale specimens, and with the specimens from Lindenberg and Scandinavia, and there is no doubt Mr Backhouse was right in supposing his specimen was *H. saxifragum*. It is most like some forms of *vulgatum*, but the leaves have the teeth beyond the general outline, and the hairs on the underneath are seated on small tubercles.

Sparganium neglectum (Beeby).—Three years ago my friend Mr Beeby called my attention to some specimens of *Sparganium* he had collected in Surrey, and which he could not make agree with either *simplex* or *ramosum*. Steadily pursuing his enquiries and collecting the plant in all stages of its growth, he felt bound to consider that at least it was a new sub-species. He has since published it under the above name in the "Journal of Botany." His opinion is concurred in by Dr Lange of Copenhagen, Dr Moir of Pisa, Dr Gray of Cambridge U.S.A., and by Mr J. G. Baker, Rev. Mr Newbould, &c., in this country. I think it says much for the botanical acumen of Mr Beeby, especially occurring in a county so well worked as Surrey has been supposed to be.

Potamogeton pusillus, L., sub-spec., *Sturrochii* (A. Bennett).—A very beautiful sub-species of *pusillus* found by Mr A. Sturroch in East Perth, which I was unable to match in my extensive collection of *pusillus* from any part of the world, in that at Kew or the British Museum, and my correspondents in Sweden and the United States (Dr Tiselius and the Rev. T. Morong, both specialists in the genus) both concur in considering it separable from *pusillus*; so I named it after the finder, who has done so much good work among the Perthshire aquatics.

Naias marina, L.—Found by my daughter at the entrance to Hickling Broad, in Norfolk, a beautiful sheet of water of about 500 acres. We were studying the aquatic vegetation, I myself looking over the masses pulled up by the "drag" she was using, and the first sight of it was her asking, "What is this?" I saw at once it was a *Naias* new to Britain. We afterwards found it scattered for over a mile of water, and last year (1885) my friend Mr Mennell found it in Somerton Broad. It occurs in Scandinavia, Holland, Belgium, France, Germany, and other parts of Europe. It is an interesting addition, adding as it does another link to the flora of Western Europe and East Anglia.

Naias graminea, Del. var. *Delilii*, Magnus.—Found by Mr Charles Bailey in a canal near Manchester, the water of which is raised to a warm temperature by the steam, &c., of works abutting on it. The members will find an exhaustive account of this plant in the memoir, by Mr C. Bailey, I was enabled to present to the Society last year.

Schoenus ferrugineus, L.—Found by Mr Brebner on heathy ground near Loch Tummell, in Perthshire, in 1884, but determined by Dr B. White, of Perth, in 1885. In Europe it is scattered over a good many parts, but it is by no means general, and is not known out of Europe. It should be looked for in damp heathy ground in other parts of Scotland.

Carex stellulata, var. *Grypos* (Schuh.)—Found by the Messrs Linton in Glen Shee, East Perthshire. In Reichenbach's "Icones Floræ Germanicæ et Helvetiæ," it is figured as a species, but is now generally considered only a variety of *stellulata*.

Carex frigida (All.)—Found by the late Mr Sadler in the corrie of Loch Cean-Mor above Glen Callater in South Aberdeenshire.

Carex ustulata (Wahl.)—Re-discovered last year (1885) in one of the mountains in Glen Lyon, Perthshire, by Mr Brebner, who unfortunately met with an accident after gathering four specimens only, for one of which I am indebted to the finder, through Dr White, of Perth. There is not the slightest doubt of its being the true plant, as I showed Dr White by sending him Scandinavian specimens, and I was very pleased to show Mr Symington Grieve, of Edinburgh, that it was the true plant, when I had the pleasure of a visit from him last January. He acknowledged that he had some doubt, as the "second party" could not find it. It is a most satisfactory find, thus confirming the accuracy, in this instance, of Don, though not for Ben Lawers, whence he reported it.

Carex salina (Wahl), var. *Kattegatensis* (Fries sp.), Almquist.—Found by Mr Grant of Wick in abundance along some distance of the River Wick. (A full account of this will be found in the Botanical Exchange Club Report which I sent the Society last year.) This is a very interesting addition to our Flora, belonging as it does to a group of Carices which belt the globe near the Arctic regions, descending here and there further south as Gotebog in Sweden, and Maine in the North United States. One Swedish station is nearly one degree further south than its

Caithness station, so I should not be surprised to hear of its discovery by some of the rivers that flow into the Moray Firth.

Carex acuta, L., var. *prolixa* (Fr. sp.)—Found as long ago as 1844 by Mr Priest in Norfolk. I found a specimen in Mr Glaspoles' herbarium; and again this year a specimen in the herbarium of the Rev. Mr Linton, gathered by Mr Cross near Ely, in Cambridgeshire.

Carex acuta, L., var. *gracilescens* (Almquist).—Found by Mr A. Fryer in Cambridgeshire, and by Mr Beckwith in Shropshire.

Carex aquatilis, Wahl. var. *epigejos* (Hartm.)—This, described as a species by Fries, and named the same year by Dr Lange *C. borealis*, was found in Perthshire by Dr White of Perth.

Carex aquatilis, Wahl. var. *cuspidata* (Laestadius).—Gathered on the banks of the River Wick in Caithness last year by my friend Mr F. J. Hanbury, among whose specimens of *salina* I found it, my name having been since confirmed by Dr Almquist of Stockholm.

Carex aquatilis, Wahl. var. *virescens* (Anders).—A pretty form of this plant found in Perthshire.

Carex stricta, Good, var. *turfosa* (Fr. sp.)—Described by Fries as a species. Found by Mr A. Fryer in Cambridgeshire.

Carex rigida, Good, var. *inferalpina*, Laestadius.—Found by Mr F. J. Hanbury on the little Culrannoch in Forfarshire last year. I have little doubt that the plant referred to by Dr Boswell in the third edition of English Botany as occurring in Little Craighendahl, Braemar, and simulating *aquatilis*, is the same.

Carex vesicaria, L., var. *diochroa* (Anders).—I have only seen a single specimen of this gathered on Ben Lawers by Mr G. C. Durce of Oxford.

Spartina Townsendii (Groves).—Near Southampton, a grass coming somewhat between *stricta* and *alterniflora*.

Agristis nigra (Withering).—Found by Mr Bagnell of Birmingham in Warwickshire, and since in several English counties, and in Fifeshire by Dr Boswell.

Calamagrostis strigosa (Hartm.), Stivhaarct Ror., stiff-haired reed.—Marshy ground, formerly Loch Duran, near Castleton, in Caithness, Scotland. Mr James Grant, of Wick. A native of Finmark, Lapland, North Norway, in Europe, and Nova Zembla. Sir J. D. Hooker, in his paper on "Arctic Plants" in the Transactions of the Linnean Society, makes the *C. aleutica* (Bongard)

and *C. Nutkaensis* (Trinius) to be the same as *strigosa*, recording it also as a Greenland plant, but it is unknown to the Danish botanists as such; if this is correct it will extend its distribution to Arctic, East and West America, and North-east Asia.

When Dr Smiles' "Life of Robert Dick" appeared, I noted his record of finding the "Lapland Rush (*Calamagrostis lapponica*)" at Loch Duran. I wrote to Mr Grant, asking him to explore the loch, and send me specimens of the plant, as I suspected it could hardly be the true *lapponica* of Wahlenberg. In 1883 he wrote—"The loch has been drained, and I fear the plant is lost." However, it was not until last July that he could make a thorough search, and he was rewarded by finding Dick's plant; he kindly forwarded me some specimens. I found it was certainly not the *lapponica* of Wahlenberg nor that of Hooker, which, Dick no doubt thought it might be. I found, on examination, it was either the *strigosa* of Hartman or the *C. borealis* of Laestadius, but having no specimens of either to make sure, I sent it to my friend, Mr N. E. Brown, of the Kew Herbarium, asking him to compare the specimen with those in Fries Herbarium Normale. His answer was—"The specimen must be *C. strigosa*, though the ligule is not quite so acute as in the typical specimens." Since then, I have sent examples to Dr Almquist, of Stockholm. Concerning the name given to it, he says the specimens are very near the Norwegian examples. It is one of the most interesting additions to the British Flora ever made, for in conjunction with *Carex salina* and others, it shows how close the affinity of the Flora of North Scotland is with that of Scandinavia, and I venture to predict, that other Scandinavian species will yet be found, not only in Caithness, but in the Shetland Isles and other parts of Scotland, especially north of the Caledonian Canal.

Scandinavia is very rich in the genus *Calamagrostis*, and opinions differ as to whether some of the plants are hybrids or not. Anyone interested in changes in plant-names could find plenty of materials in this genus in the successive editions of Hartman's "Handbook of the Scandinavian Flora," from the first to the eleventh.

Lycopodium complanatum.—Found by Rev. Mr Reader in Gloucestershire, and since in several counties, though several are doubtful, and Dr Boswell doubts any of the specimens being the

true plant; but they are confirmed by Mr J. G. Baker and Mr Carruthers.

Chara stelligera (Bauer).—It was my good fortune to discover this in abundance in Filby Broad, Norfolk, and the next year in Heighan Sound, near Hickling. Since that date it has been found in several other broads by Messrs Holmes, Hanbury, and Groves.

Chara Brunnii (Gmel.)—Found by Mr C. Bailey with *Naias graminea* near Manchester.

Chara polyacantha (A.H.)—Not well separated from *C. hispida* till lately. It is now known for several Scotch and English counties.

Chara baltica (Fries).—From Cornwall, where it was found by Mr Curnow.

Chara intermedia (Fr.)—Norfolk; found by Mr Groves.

Chara contraria (Fr.)—Found by Mr Groves in Cambridgeshire, and by myself in Norfolk the same year.

Carex helvola (Blytt), in Scotland.—Having had occasion lately to carefully examine specimens of *Carex curta* named by our British botanists, “*alpicola* (Wahl),” to see if I could discover whether we had the true *C. vititis* (Fr.) in Britain, a specimen from Lochnagar on being dissected proved to be *C. helvola* (Blytt). To make quite sure I sent half of the specimen to Dr A. Blytt of Christiana, and he wrote a few days ago confirming my name. The Lochnagar specimen is labelled—“Ex Herb Edinburgh Botanical Society. *Carex curta alpicola* (Wahl). Lochnagar, August 11, 1846. Prof. J. H. Balfour.” This was three years before *helvola* was described by Blytt in Fries’ “*Botaniska Notiser*.” I have little doubt it will be found in other Herberia under the same name. By the kindness of Dr Blytt, I am able to send a scrap of the species, which is at any member’s disposal.

Equisetum litorale (Kübelwein.)—Found by Mr Beeby on Bisley Common, Surrey, where it was growing in pure white sand, overlaying peat. This is an interesting addition to our Flora, and perhaps more so because found in so well searched a county as Surrey is supposed to be. In Europe it occurs in Denmark, North Germany, South Sweden, Bohemia, Austria, North and Mid Russia; in France and Switzerland, but very

rare. It was discovered by Kühelwein near Oranicubaun, in Middle Russia. It was thought by Ruprecht to come near the var. *campestre* and *articum* of *C. arvensis*, but considered a hybrid between *arvensis* and *limosum* by some German botanists, their usual way out of a difficulty in placing a plant.

SPECIAL LECTURES.

- I. 20th November, 1885.—*An Evening with the Microscope.*
By Mr J. WILSON.
 - II. 22d January, 1886.—*Some Points of Insect Physiology.* By
Rev. R. MULLINS.
 - III. 19th February, 1886.—*Human Anatomy and Physiology.*
By Mr J. RUTHERFORD.
 - IV. 19th March, 1886.—*The Eye.* By Dr J. CUNNINGHAM.
 - V. 9th April, 1886.—*Buttercups, Primroses, and Daisies.* By
Mr J. WILSON.
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V E R S E S

*For the Dumfriesshire and Galloway Natural History and
Antiquarian Society, November, 1885.*

"A primrose by the river's brim,
Or at the cottage door,
A yellow primrose was to him,
And it was nothing more."
Wordsworth.

The book of Nature open lies,
Where all may read, who care
To search her mysteries, and learn
The symbols graven there.

But deeper truths can be revealed,
With Wisdom as a guide,
To lead by upland brake and glen,
Or tranquil river side.

An earnest few together tried
To form a student band,
To ponder Nature's forms that lie
Profuse on every hand.

To lure awhile from sordid toil,
To mark, and learn, and know
The perfect fitness, perfect ends,
God's lowliest works can show :

To search by grove and secret spring
Each haunt of bird and flower,
While bounding pulses glad proclaim
That knowledge giveth power :

The sequence of the floral year,
Unerring Nature's plan,
The treasure stored in mine and case,
God's bounteous gifts to man :

To scan the stars that nightly rise
With solemn stately march,
To name the glittering orbs that glow
On Heaven's midnight arch.

Off old historic ground was trod,
And battlemented wall,
Now hoary ruin, echoing once
The warrior's martial call.

"To him who in the love of nature holds
Communion with her visible forms
She speaks a various language."
Bryant.

From every year that glided on
Were snatched a few brief days,
To dedicate to noble ends,
And walk in Wisdom's ways.

The bygone summer scarcely sped,
A boundless wealth has giv'n
Of bloom and blossom, golden days,
Spanned by a smiling heaven.

Old haunts were visited once more,
Where Nith's rock-circled wave
Stole softly through o'ershadowing
woods,
Or paused in mimic cave.

Once more were seen the girdling
walls,
Where gifts from every clime
Are brought, the added treasures
mark
Its calendar of time.

Where Urr its sluggish waters rolls,
To meet the western sea,
A noble house its portals op'ed
In hospitality.

Its woods and gardens tended with
A watchful, guardian care,
That wins the alien stems to thrive
In kindly Scottish air.

The winter days are darkening now,
And storms for sunshine give,
But records of these brighter hours
In storied annals live.

AGNES MOUNSEY.

FIELD MEETINGS, 1884.

CORNCOCKLE QUARRY, SPEDLINS TOWER, &c.—*3d May, 1884.*

The first Field Meeting of this session was held on the 3d May, when, according to the programme, "Wood Castle, Lochmaben, Corncockle Quarry, Spedlins Tower, St. Ann's Bridge, and Raehills Glen would be visited." Owing to the weather being cold and unsettled, a party of sixteen only assembled at the Fountain at the hour of starting (9.30 A.M.), and took their seats in the waggonette which was in waiting to convey them to the places mentioned. After a sharp drive for half an hour through the keen morning air, a halt was made at Torthorwald to allow the members to inspect the old castle, which has been for centuries a conspicuous object in that picturesque landscape. The origin of the castle is traditional, and the first authentic account of it is in the thirteenth century, when William Carlyle received from his uncle, King Robert Bruce, a charter of the lands of Collin and Roucan. From the style of the building, it is supposed to be between 700 and 800 years old, and like other noble ruins throughout the county, it has suffered severely from vandal hands.

Returning to the conveyance, after spending half an hour in examining the ruins and collecting the spring flowers in the vicinity, they proceeded over the hill towards Lochmaben. At Ryemuir sad mementoes of the two very heavy storms of the preceding winter were seen. Almost all the trees in the plantations were either torn up by the roots, or snapped across the middle. The devastation at Corncockle was even more complete, for there almost 100 acres of wood were left without a tree standing. The next halt (after Torthorwald) was made at the farm house near Wood Castle, where the party dismounted and walked through the adjoining field to the Camp. The Camp, for such it is, is evidently of Roman origin, for a Roman Road runs past the base, and it is in a direct line between Burnswark on the east, and Camp Hill, Tinwald, further to the west. It measures 278 feet across the top at the greatest diameter from terrace to terrace, and has two entrances—one on the north-east side, and the other on the west. From the Camp the drive was continued to Corn-

cockle Quarry, where two hours were spent in examining the different cuttings. Here a business meeting was held, when Captain J. J. Hope-Johnstone was elected a life member, and Mr J. Rae an ordinary member. This quarry has been fully described by the late Sir W. Jardine, Bart., and also the numerous footprints of the extinct tortoises which were discovered here. On three large slabs of the sandstone several of these impressions were noticed.

Spedlins Tower was next visited, but owing to an oversight, only the exterior could be examined. It is situated on the bank of the Kinnel, and belongs to Sir A. Jardine of Jardine Hall. The tower is a square structure in the Scotch Border style, and has a turret at each of the four corners. The only entrance is on the north side, through an arched doorway, over which is a large square stone with the Jardine crest and the date 1605.

Returning to the conveyance, which was left at the quarry, the party was forced to beat a hasty retreat to one of the sheds, for the rain and hail, driven by a strong north-west wind, was too much for even the nerves of the naturalists. Having waited for nearly an hour till the storm passed, it was decided to abandon the rest of the programme for the present, and to return to Dumfries by the way of Elshieshields and Kirkmichael.

Owing to the lateness of the spring very few botanical specimens were collected; however the following plants were picked up during the excursion:—*Cardamine hirsuta*, *C. pratensis*, *Viola tricolor*, *Montia fontana*, *Alchemilla vulgaris*, *A. arvensis*, *Potentilla Fragariastrum*, *Chrysosplenium oppositifolium*, *Galium cruciatum*, *Veronica hederifolia*, *Lamium album*, *Nepeta Glechoma*, *Luzula campestris*, and *Primula veris*, which is not common in this district, found near Torthorwald Church. *Asplenium Ruta muraria* is plentiful among the stones of Torthorwald Castle, and *Funaria hygrometrica*—a beautiful moss—covered large patches of the ground near Templand Village.

SOUTHWICK GLEN AND DOUGLAS HALL.—7th June, 1884.

The second Field Meeting of the session was held on the 7th June, when Southwick Glen and the shore from there to Douglas Hall were visited. A party of thirty assembled at 9 A.M. at the Fountain, and having taken their seats in three waggettes

that were in waiting, they proceeded to Southwick mansion house, by way of Newabbey and Kirkbean, which they reached at noon. On their arrival they were met by Mark J. Stewart, Esq., who had not only given permission to explore his grounds, but also had invited the members to luncheon. Under Mr Stewart's guidance the whole party first visited the policies to see the silver firs (*Picea pectinata*), some of which were the finest in Scotland. Many of these noble and handsome trees succumbed to the force of the severe gales in December, and especially to that on 21st January. One of them which escaped the fury of the blast measured $15\frac{1}{2}$ feet in circumference at the height of four feet from the ground. After arranging to meet at the mansion house at 2.30, the party divided, the majority going up the sides of the Southwick burn, thence through the rough ground, and over an adjoining hill to the plantation, in which is the private burying ground of the Stewart family. From there they returned to the house, passing through several plantations and fields, picking up specimens as they went.

The smaller portion, under the guidance of Mr Stewart, visited the well-stocked gardens, and the home farm, on which Mr Stewart had been cultivating the natural grasses. Punctual to arrangement, the members re-assembled, and were welcomed by Mrs Stewart and Miss Stewart.

Having partaken of luncheon, a business meeting was held in the dining-room, at which Mr Stewart was elected a life member of the Society, and Mr A. K. Fotheringham an ordinary member. On the motion of Mr Wilson, Vice-President, it was agreed to have a special meeting to Raehills Glen in the third week in July, and on the motion of Sheriff Hope, Vice-President, a hearty vote of thanks was awarded to Mr Stewart and to Mrs and Miss Stewart for their kindness and trouble.

At three o'clock the party took leave of their host and hostess, and proceeded to Douglas Hall, several of them preferring to walk along the road and the shore to collect specimens, while the remainder came along in the machines. After spending some time on the sands and cliffs, they re-assembled at seven o'clock for the homeward journey, by way of Dalbeattie, and reached Dumfries about ten o'clock, having had a most enjoyable day.

The following plants were found:—*Barbarea vulgaris*, *Brassica campestris*, *Cardamine sylvatica*, and *Sisymbrium Alliaria*, near

Whinnyhill. *Geum urbanum*, *Spergularia rubra*, *Lysimachia nemorum*, *Helianthemum vulgare*, *Sedum anglicum*, *S. Telephium*, *Galium saxatile*, *Euphrasia officinulis*, *Gnaphalium dioicum*, *Carex panicea*, *C. binveris*, *Pinguicula vulgaris*, *Ficinia angustifolia*, *Polygala vulgaris* (blue, pink, and white specimens), *Corydalis claviculata*, *Nephrodium spinulosum* (not common), and *Polypodium phegopteris* on the hill and in the fields and wood near Southwick mansion-house. *Linaria cymbalaria* at the bridge, and the following on the way to Douglas Hall:—*Achusa sempervirens*, *Lithospermum officinale* (rare), *Geranium sanguineum*, *Rosa spinosissima*, *Glauca maritima*, *Primula veris*, *Anthyllis Vulneraria*, *Blysmus rufus*, *Triglochin maritima*; and *Erodium cicutarium* (rare) at Douglas Hall.

Mr Lennon supplies the following note respecting the entomological finds:—So far as I have seen of this current year, all the various orders of insects appear exceedingly scarce. Entomological experience tends to prove that after a mild wet winter, such as we have had this season, insects are as a rule much scarcer than after a cold hard frosty winter. The results of last Saturday present a case in point. The day was exceedingly fine—just such a day as one would naturally expect to find teeming with insect life; and if there is a spot in the south of Scotland where an entomologist would expect to find insects in abundance, it would doubtless be in those beautiful woods and grounds round Southwick House. No doubt they are there when the seasons are suitable for them. Among the diurnal *Lepidoptera* we observed faded specimens of *Anthocharis Cardamines*, *Satyrus Megara*, *Cynthia Cardui*; also some fine specimens of the *Argynni*, but whether it was *Argynnis Selene*, or *A. Euphrosyne*, could not be defined, as the insects were on the wing. *Coleoptera* were very scarce. In some damp boggy places *Elaphrus cupreus* put in an appearance. Under stones on the high ground we found *Curabus catenulatus* and *C. violaceus*, *Clivina collaris*, *Dyschirius ceneus*, and *globosus*. Among the *Hymenoptera* we found fine specimens of *Bombus Lapidarius*, *B. Locorum*, *B. Virginalis*, *Apathus Vestalis*, and *A. Campestris*.

CRAIGDARROCH AND BARJARG.—5th July, 1884.

The third Field Meeting of the session was held on the 5th July, when a party of twenty-five met at the Fountain at nine o'clock to take part in it. Soon after the appointed hour they drove off in two waggonettes by way of Dunscore and Moniaive, intending to visit the places of interest *en route*. The first halt was made at Holywood, to allow the members to visit the so-called Druidical Circle on the farm of Kilness. Among the party was the Rev. Mr Lucas, F.S.A., London, who has given special attention to the subject of standing stones and their markings. There are eleven stones yet standing, and as to how they came there, and the objects they served, there were various opinions and doubts expressed. The largest stone was estimated to weigh about 12 tons, the next largest 9 tons, and the smallest between 2 and 3 tons. Leaving the Druidical Circle, the party resumed their journey, passing through Dunscore Village, and enjoying the picturesque scenery of the charming valley of the Cairn. At the lower end of the parish of Glencairn, Dr Gilchrist directed the attention of the party to the channel of the river Cairn, as that river has unmistakably changed its course at a not very distant date. He pointed out the old course, and suggested that a lake then covered the hollow, which to-day is fertile fields. Proceeding further the party reached "Maxwelton Braes," which were as "bonnie" and as attractive as ever. Further along the road a halt was made to inspect a stone with the name of William Smith upon it. It is supposed to mark the spot where a Covenanter of that name was massacred, and who was buried in Tynron Churchyard. Another stone in that Churchyard bears the following inscription:—

" I, William Smith. now here do ly,
 Once martyred for Christ's verity ;
 Douglas of Stenhouse, Laurie of Maxwelton
 Caused Coronet Baillie give me martyrdom.
 What cruelty, they to my corpse then used
 Living may judge—me burial they refused."

In Glencairn Churchyard there are four martyrs—John Gibson, James Bennoch, Robert Edgar, and Robert Mitchell—buried ; but time would not permit the party to inspect the stones raised to their memory.

On arriving at Moniaive, the old market cross, which was erected there in 1638, was visited, and also a monument

erected on an adjoining height to the memory of the Rev. James Renwick, the last of the martyrs, who was a native of this village. The party now divided, a few going to visit the Caitloch Cave, while the majority proceeded on foot to Craigdarroch, about two miles distant. On arrival, the latter were cordially welcomed by Mr A. Fergusson and hospitably entertained. This family is the oldest in the parish, and has been on many occasions nobly distinguished. During the persecution of the Covenanters, the Fergussons were the staunch friends of the oppressed. In 1689, at the battle of Killiecrankie, John Fergusson, one of the noble defenders of the "Kingly Covenant," was slain, and the saddle on which he rode is now preserved at Craigdarroch, and was exhibited to the party. A number of interesting objects were exhibited; chief among them was "The Whistle" of the contest sung by Burns. It is not an ebony whistle, as described by the poet, but tawny-coloured and probably of olive wood. It is mounted in silver, on which the Fergusson coat of arms is inscribed, and the words—"Whistle won by Craigdarroch, sung by Burns."

"Thy line that have struggled for Freedom with Bruce
Shall heroes and patriots ever produce;
So thine be the laurel, and mine be the bay;
The field thou has won, by yon bright god of day."

Mr Fergusson also exhibited a document which was only recently discovered among family papers, and is of great interest. This was the last will and testament of Annie Laurie, subscribed by two witnesses, and written upon a sheet of paper. Having visited the gardens and grounds the party took leave of Mr Fergusson, but before doing so, on the motion of Mr Brown, they accorded him a hearty vote of thanks. Returning to Moniaive and joining the other party, they commenced the homeward journey under a pelting thunder shower of hail and rain. The next place visited was Barjarg, and here they were cordially welcomed and hospitably entertained by Mr Hunter-Arundell. Having partaken of refreshments they were shown a number of handsomely illuminated manuscripts of pre-Reformation dates. One of these was a copy of the Magna Charta on vellum. It was of Mr Hunter-Arundell's library that Carlyle, in writing to his brother in 1833, says — "Yesterday I drove over to Barjarg in the middle of a thick, small rain, to get the keys of the Library, which I find most handsomely left for me, so that I

could seize the catalogue and some half dozen volumes to be returned at discretion. It is really a very great favour." Having inspected a number of the rare old *tomes* and the collection of paintings, the party returned to the dining room. Here a business meeting was held, when Mr F. Maxwell of Gribton, and Mr R. Murray, Dumfries, were elected members. On the motion of Dr Gilchrist (President), the thanks of the Society were given to Mr Hunter-Arundell. Afterwards the party visited the lime works and the quarries, but as the day was now far advanced these were only done in a cursory manner. At seven o'clock the party once more resumed their seats, and continued their homeward journey, driving past Friars' Carse, Ellisland, and Lagg Churchyard, and arrived in Dumfries about nine o'clock.

GARREL OLD CHURCHYARD, RAEHILLS GLEN.—19th July, 1884.

As arranged at the Field Meeting in June, a special excursion was held on this date to visit the places omitted in the programme for May. At the hour of starting (9.30 A.M.) only a dozen members assembled, and these having taken seats in a waggonette, were soon on their way for the Glen.

At Garrel the first halt was made, where a half hour was spent in the roofless fane and among the tombs. At Hartfield farm they were joined by the worthy tenant—Mr M'Adam—who had kindly offered to conduct the party through the Glen. Acting under his directions, they continued their drive to the saw-mill at Raehills, and there dismounted. Having arranged to meet the waggonette at Hartfield farm, they proceeded to the farmhouse of Boreland, where a rude stone bigging, of antique architecture, was examined. From there the walk was continued up-stream for about a mile, to inspect the deep channels which the burn has worn in the Silurian rock. At this place pieces of the rock richly studded with iron pyrites, and several graptolites were picked up. Following the source of the Duff Kinnell, the party wended their way past the mansion of Raehills, St. Ann's Bridge, until Hartfield was again reached, about five o'clock. Having partaken of a welcome tea, and passed a vote of thanks to Mr M'Adam and Miss M'Adam, they started for Dumfries, which was reached about eight o'clock.

The following is a list of plants found during the excursion: — *Hypericum humifusum*, *H. pulchrum*, *Malva moschata*, *Geranium sylvaticum*, *Spicea salicifolia*, *Geum urbanum*, *Circea lutetiana*, *Gulim palustre*, *Filago germanicum*, *F. minima*, *Gnaphalium sylvaticum*, *Senecio aquaticus*, *Crepis paludosa*, *Scrophularia nodosa*, *Habenaria bifolia*, *Potamogeton natans*, *Nurtheicum ossifragum*, *Juncus conglomeratus*, *J. squarrosus*, *J. compressus*, *J. articulatus*, *Luzula campestris* var. *congesta*, *Scirpus setaceus*, *Carex pulicaris*, *C. stellulata*, *C. pallesens*, *Aira flexuosa*, *Molinia cœrulea*. The oak and beech ferns were very abundant on both sides of the glen, but only one specimen of the Hard Shield (*Aspidium aculeatum*) was seen. About 30 specimens of mosses were collected, the rarest being *Bartramia fontana*, *B. Pomiformis*, *Dicranum majus*, *Ulota intermedio*, *Ulota Bruchii*, and *U. crispum*.

GARPEL GLEN AND MOFFAT DISTRICT.—2d August, 1884.

The fourth Field Meeting of the session was held on the 2d August, when Garpel Glen and places of interest in the Moffat district were visited. About a dozen left Dumfries Station by the 9.20 A.M. train for Beattock, where they were joined by other members and Mr Dairon, F.G.S. From the station they proceeded through the wood adjoining, and over the rising ground to the summit of the Beattock Hill. Here half an hour was spent in inspecting the remains of an old British Camp and in enjoying the delightful view of the surrounding country. From here the party proceeded across the moor to an adjacent height to visit another Camp, but whether this was of Roman or British origin is doubtful. Continuing the walk along the high ground, through one or two plantations, the party arrived at Auchencas Castle, where another halt was made. This Castle was a formidable stronghold in earlier times, and from its commanding position on the summit was an important key to the pass through the hills. It was a square structure, measuring 120 feet either way, and had at each corner a circular turret. The walls measured ten feet in thickness. Here a business meeting was held, when Mr Wilson, Vice-President, presided, and Mr Dairon, F.G.S., was elected an honorary member.

The party next proceeded down the Garpel Glen, but as they entered it, an ominous sign-board cautioned the visitors from "gathering flowers and ferns." This caution was rigidly respected, for with the exception of the common agrimony (*Agrimonia Eupatoria*), none of the plants were deemed worthy a place in the botanist's vasculum, the glen having long ere this been pillaged by the wanderers of all the scientific societies in the country. As no flowers were to be had, two hours were spent in collecting mosses and searching for graptolites among the shales and in the bed of the stream. The party continued their course down the stream until they came to the railway bridge, when they ascended the embankment and walked along it until Beattock Station was reached. The old bridge across the Annan was next visited, and from there, they continued along the road to Moffat, halting, however, at the "three stanin' stanes," and visiting Loch House Tower. At a short distance from Moffat, near the railway bridge, they visited a section of the railway cutting where a dyke of trap was exposed. Arriving in Moffat about five o'clock, they spent the interval until train-time in visiting the wells or other places of interest in the town.

Among the finds of the day were—*Empetrum nigrum*, in fruit; *Parnassia palustris*, and *Viola lutea*. The following graptolites were identified by Mr Dairon:—*Monograptus sagittarius*, *M. tenuis*, *M. intermedius*, and *Diplograptus foliaceus*.



LOCHMABEN, DORMONT, AND KELHEAD.—6th September, 1884.

The last Field Meeting of the session was held on the 6th September, when a party numbering about twenty left the Fountain at 9.30 in waggonettes for Lochmaben. Arriving at Bruce's Castle, they were met by the Rev. W. Graham, who conducted them round the ruins, and narrated several incidents connected with the history of the building. Mr Graham expressed the hope that Mr R. Jardine, M.P., would co-operate with Mr Hope-Johnstone and the Town Council of Lochmaben in having the interior and exterior cleared of rubbish, and the structure repaired. Having spent an hour in examining the ruins, and awarded Mr Graham a vote of thanks, they returned to the conveyances and continued their journey to Dormont.

On entering the grounds at Dormont House, they were joined by Mr Johnstone of Castlemilk and Mr Smith, the gardener, who was to conduct them through the policies. The object of the visit here was to inspect the supposed original bed of the river Annan—for that river now flows past Hoddam Castle, about six miles distant—and to ascertain the cause of the change if such were the case. A large pond near Dormont House was first inspected, for it was stated by some of the party that this originally formed a portion of the river. As there was nothing visible to justify this opinion, they proceeded along the supposed course of the river until a point known as the Dormont Rocks was reached. Here the rocks are supposed to have been upheaved by volcanic agency, and it is to this that the supposed altered course of the river is due. As the time at the disposal of the party was limited they were unable to investigate the disputed point, so the question was left until a future occasion for solution.

From Dornock they proceeded to Kelhead Quarries, where a couple of hours were spent in examining the different sections of the limestone rock, and collecting specimens of corallines and other fossils. Having partaken of a refreshing tea—prepared by one or two ladies—they resumed their seats in the conveyances for the homeward journey about half-past five, and arrived in Dumfries about seven o'clock.

FIELD MEETINGS, 1885.

SPOTTES GLEN AND MOAT OF URR.—*2d May, 1885.*

The first Field Meeting of the session was held on the above date, when a party of eighteen left Dumfries by the 9.27 a.m. train for Dalbeattie. On arriving there they were joined by two or three others, and proceeded thence in waggonettes through the beautiful valley of the Urr to Spottes. Here they were met by Mr Herries of Spottes, who had kindly granted permission to visit the romantic glen, and who now conducted the party to it. Leaving the road at the bridge they followed the winding stream for about a mile, when a halt was made at the Glen farmhouse, where Mr Herries pointed out several large stones in the wall, which appeared to have been formerly part of an ecclesiastical edifice, and remarked that a chapel at one time had been built in the adjoining field. The only trace of this building now seen was a few feet of a wall on the steep bank of the stream. The party now separated, and the members explored the glen and adjoining woods until two p.m., when they reassembled and partook of luncheon, which had been provided by Mr Herries. Thus refreshed they returned to the mansion house, when the botanists explored the woods adjoining, and visited the beautiful flower gardens. The geologists, under the leadership of Dr Gilchrist, examined Mr Herries' collection of rocks and minerals. Before leaving Spottes, a short business meeting was held, and, on the motion of Mr W. H. Maxwell of Munches, Mr Herries was elected a member of the Society. On the motion of the President (Dr Gilchrist), Mr Herries and his son were thanked for the hearty welcome they gave to the Society, and for conducting them to the Glen, through the garden and grounds. Having bidden adieu to Mr Herries, they resumed their seats in the waggonettes about four o'clock, and were soon on their way to the Moat of Urr. The Moat is situated on the west bank of the Urr, about a mile from Dalbeattie, and is the largest, as well as one of the most complete in Britain. Owing to the unavoidable absence of Mr J. H. Maxwell, of Castle-Douglas, who was to describe the Moat, the Secretary read a short extract

from that gentleman's *Guide Book to the Stewartry*, giving the traditionary account of Bruce's combat with Sir Walter Selby, and of Bruce conferring these lands on the Sprottes of Urr.

It was remarked that plants were in blossom about three weeks earlier than last year, and the following among others were found during the day:—*Cardamine hirsuta*, *Druba verna*, *Sisymbrium Alliaria*, *Viola sylvatica*, var. *Rivimiana*, *Lychnus diurna*, *Geranium lucidum* (a new locality), *Genm rivale*, *Bunium flexuosum*, *Adoxa moschatellina* (very fine specimen), and *Aspidium aculeatum*, var. *lobatum*. About 40 specimens of mosses were picked up, including *hypnum alopecurum* in fruit.

PARTON AND LOCH KEN.—6th June, 1885.

The second excursion of the session was held under most favourable auspices, for the weather for three or four days prior was warm and summer-like, and the district to be visited had every attraction that the members could wish. Accordingly, a larger party than usual left by the early train for Parton Station, and on reaching Castle-Douglas their number was increased by a few members from Kirkeudbright. On arriving at Parton they were met by Mr M'Andrew, of New-Galloway; the Rev. Mr Pattullo, Mr Pattullo, jr., and others. Mr Pattullo having kindly invited the Society to luncheon, now offered to guide the party to places of interest in the district. The first place visited was the Slate Quarries, but as these had not been worked for several years the loose *debris* only could be examined, although the geologists had a good opportunity of inspecting the various cuttings. A halt was made for about an hour here, when the president, Dr Gilchrist, described the various details of splitting the slate, and mentioned the various characteristics of this rock. The botanists explored the adjoining woods and fields until 1 p.m., when it was arranged that the party should assemble at the Old Church. The modern church was erected in 1824, but in the churchyard adjoining are the remains of its predecessor, which had been built in 1592.

Mr Barbour, V.-P. (architect), described the old building, and now supplies the following note:—

The Church of Parton is situated on the banks of the Dee, and near it within the churchyard are the remains of an older church, said to have

been built in 1592, and to have measured 72 feet in length. The pulpit was of oak, carved, and inscribed with the date 1598. It is now in the Antiquarian Museum, Edinburgh. The remains of the church consist of the east gable wall and small portions of the two side walls attached to it, and the width of the building is 15 ft. 3 in. over the walls. The walls are built of the common whinstone of the district, the corners being formed of the same materials. The door, which is in the south wall, and a window in the east wall, have hewn and chamfered dressings of a whitish sand or gritstone; and the lintel of the window deserves special notice. It is curved lengthways, and gives to the window top the form of a segmental arch, and its cross-section shews a hollow on the under side, a round on the upper, and between them a flat edge about two inches broad, on which there is an incised inscription in old English characters. The stone has evidently been part of a dripstone of an arched opening, and there is little doubt it is of mediæval date.

Two corbels of white stone, moulded and having leaf carvings, project from the outer face of the gable wall at corresponding points near the skewpits, which, as at present placed, could not have served any practical purpose, and they have the appearance of being old work. Probably all the hewn stones are remains of an earlier church.

The bell turret is built of white sandstone, and there is a small panel in the gablet of it, inscribed: *Laus deo, 1636.*

The bell in the old turret, which measures 9 inches in height and 10½ inches diameter, is still in use, as there is not one in the new church. Its age is unknown, and it bears no inscription.

The early ecclesiastical history of Parton is meagre. We learn that in August, 1296, Walter de Derrington, parson of Parton, swore fealty to Edward I., and nothing more until 1426, when John MacGilhauck was rector. He was also secretary to Margaret Countess of Douglas, whose rich tomb adorns the chancel of Lincluden Abbey. In the reign of James IV. James Hepburn, afterwards Bishop of Murray, was rector.

Some time ago, when the door step of the new church was being repaired, a sculptured stone was turned up, and Mr Pattullo, the minister, had it placed within the church for preservation, where it now is. The stone is a very interesting one, and it clearly belongs to mediæval times. It is part of a recumbent sepulchral effigy, cut in bluish white stone, and is in such excellent preservation that its position must have been within the church.

There is at the bottom of the stone an inscribed border, the letters being in old English and raised, and doubtless the border would extend round the four sides of the complete slab. The effigy has been full length and in half relief, and represented an ecclesiastic vested. The points of the feet appear above the inscribed border, and over them the *albe*. Over the *albe* is the *stole*, with ornamented end borders and fringes, inscribed in raised old English letters what appears to be the words *Johnas mc.* Above the *stole* is a small part of the *chesible*, pointed, and coming low down, the surface of which is richly and beautifully worked in scrolls and foliations, representing embroidery, and the design possesses much delicacy and grace. This beautiful monumental slab evidently belongs to a period

when sculpture had reached a high stage of excellence. Can the effigy be ascribed to John MacGilhauck, rector of Parton, and secretary to the Countess Margaret?

Having seen the ruins, &c., the party crossed the railway to inspect a moat in the adjoining field. This one is not very large, being only 120 yards in circumference. It is surrounded by a ditch 9 feet deep. From here the party retired to the Manse, where they were hospitably entertained by Mr and Mrs Pattullo. After partaking of refreshments, a short business meeting was held in the dining room—Dr Gilchrist presiding. Miss Stewart, Dumfries; Messrs J. Coghlan, Castle-Douglas; T. A. Moryson and J. Selman, Dumfries, were elected new members. The Secretary submitted a letter received from the Cumberland and Westmoreland Antiquarian Society, stating that that Society purposed visiting Carlaverock Castle, Comlongan Castle, and the Ruthwell Cross in July, and inviting this Society to take part in the excursion. It was agreed to join in the excursion, and the Secretary was instructed to make the necessary arrangements. The Secretary also submitted an invitation from W. H. Maxwell, Esq., to visit the Munches district, and it was agreed to have a special excursion there, on 25th July, if that date would be convenient. Mr Pattullo exhibited a number of curiosities, including drinking vessels and native pottery from the Fiji Islands, which had been sent him by his son, Dr Pattullo, who is residing there.

As time would not permit visiting the "Cow's Clout," which was about three miles distant, some of the party agreed to visit Lowe's seat at Airds; while the botanists, under the guidance of Mr Walker of Crossmichael, who had kindly placed a boat at their service, proceeded to explore one of the lake dwellings in Loch Ken. With the exception of a few piles standing in the water, no other trace of the dwelling could be seen.

The following were among the plants found during the day:—*Trollius europæus*, *Draba verna*, *Polygala vulgaris*, *Spergularia rubra*, *Ornithopus perpusillus*, *Vicia angustifolia*, var. *Bobartii*, *Prunus padus*, *Sedum anglicum*, *Meum athamanticum* (not common about Dumfries, but very abundant in the meadows along the Ken), *Veronica agrestis*, and *Lysimachia nemorum*, *Botrychium Lunaria*, in a field at Chapelbrae, and *Nitella opaca*, very abundant in the Ken.

THORNHILL DISTRICT.—4th July.

The third meeting of the session was held on the 4th July, when, according to the programme, the party was to leave Dumfries Station by the 8.57 A.M. train for Thornhill, and proceed from there by conveyances to Drumlanrig Bridge. From there they were to walk along the Duchess's Drive, and through woods and glens by the side of the Nith to Glenairlie Bridge, where the machines and those who preferred remaining in them, would be in waiting. On re-assembling they were to visit Ballagan Moat, Tibbers Castle, and Dr Grierson's Museum. At the appointed hour 36 members left the station, and on their reaching Thornhill they were joined by Dr Grierson, and subsequently by Mr Shaw and Mr T. Brown, the latter having promised to conduct the party in their explorations. The first halt was made at Drumlanrig Bridge, to allow the party to view the beautiful scenery there, and to walk along the bank for a short distance to the foot-bridge spanning the river. Having spent half-an-hour in this delightful spot, they retraced their steps to the machines, when the botanists and those who cared for a five-mile walk started along the Duchess's Drive. The ladies and a few others took their seats in the machines and drove to Glenairlie Bridge. From Glenairlie they proceeded to the farm-house of Burnmouth, where they were most hospitably entertained to luncheon by Mr Milligan.

Owing to corn having been sown in the field in which Ballagan Moat was situated, and it being now saturated with the heavy showers of the preceding night, it was thought advisable not to visit it on this occasion, so the party resumed their seats and drove to Tibbers Castle, along the high road over Crairie Hill, thus enabling them to have a magnificent view of the valley of the Nith, which is one of the finest pieces of scenery in the south of Scotland. Tibbers Castle was reached in good time, and it was duly described by Dr Grierson. It is supposed to have been originally a Roman fortress, named in honour of Tiberius Caesar. Very little of the structure now remains, except portions of two of the outer walls.

Under Mr Brown's guidance the party spent half an hour in the gardens at Drumlanrig, and from there they drove to the Thornhill Museum, which was reached about half-past five. Having partaken of tea, thoughtfully provided by Mary (Dr

Grierson's housekeeper), they entered the museum, where a short business meeting was held. The Secretary intimated that it had been arranged to meet the Cumberland Society on Friday, the 24th July, and that the excursion to the Munches district would be held on the 25th. They next inspected a number of interesting objects recently received by Dr Grierson, and under his guidance visited the grounds, where a large collection of alpine and other rare plants were noticed in flower. Having spent two hours here, they returned to Dumfries by the eight o'clock train, after spending a most enjoyable day. The following were some of the plants found during the excursion:—*Thalictrum majus*, *Cardamine amara*, *Geranium sylvaticum*, *Sedum telephium*, *S. Anglicum*, *S. villosum*, *Sanicula europæa*, *Doronicum pardalianches*, *Campanula latifolia*, *Pinguicula vulgaris*, *Lysimachia nemorum*, *Juniperus communis*, *Orchis latifolia*, *O. maculata*, *Habenaria bifolia*, *H. chlorantha*, *Gymnadenia Conopsea* (white and red varieties), *Listera ovata*, *Carex sylvatica*, *Melica nutans*, *M. uniflora*, *Aspidium lobatum*, *Scolopendrium vulgare*, and remarkably large specimens of *Polypodium Phegopteris* and *P. Dryopteris*.

SPECIAL MEETING.—24th July, 1885.

On Friday, the 24th July, a party of a dozen assembled at the Dumfries Station to meet the Cumberland and Westmoreland Archæological Society, and subsequently visited with them Carlaverock Castle, Comlongan Castle, and the Ruthwell Cross. At Carlaverock a short paper was read by Mr Nanson, descriptive of the Castle, and Comlongan was similarly described by Mr R. S. Fergusson when the party reached that interesting building. On arriving at the Ruthwell Cross, the Societies were met by the Rev. Mr M'Farlan, who pointed out the runes, and gave an interesting and detailed description of the monument. After partaking of refreshments, kindly provided by Mr M'Farlan, the Societies bade adieu to their host, and to each other.

MUNCHES DISTRICT.—25th July, 1885.

Availing themselves of the kind invitation given by W. H. Maxwell, Esq., to visit the district of Munches, a party number-

ing about fifty left the Dumfries Station by the 12.20 train for Dalbeattie. Here they were joined by some of the Kirkcudbright members, and by Mr Wellwood Maxwell, who came to welcome them, and to conduct those who felt inclined for a five mile walk by way of Barsoles Hill, Buittle Old Church, and Kirkennan Wood to Munches; those otherwise disposed were to proceed direct to Munches, halting by the way to inspect the granite quarries. As the day was most favourable, a large majority decided for the longer and more attractive walk. Accordingly the start was made without delay, and the party proceeded along the railway embankment to the viaduct across the Urr, the botanists picking up *Arenaria serpyllifolia*, *Campanula latifolia*, and *Calamintha Clinopodium*. Leaving the embankment they proceeded through Barsoles Wood, over Barsoles Hill, and one or two adjoining heights until the Old Church of Buittle was reached, noticing by the way Buittle Old Castle. On arriving at the Church they were met by the Rev. Mr Grant, and under his guidance the interior was inspected. Mr Barbour furnishes the following note respecting this very ancient and sacred edifice:—

The remains of the old church of Buittle stand within the churchyard, a little south of the present church. The situation is an elevated one, and commands extensive prospects of the broken and diversified country around. The church itself is unroofed, but its walls continue entire, or nearly so. A grateful feeling is experienced on viewing the remains and observing with what evident veneration they are regarded, and how well they are cared for. The floor is of turf, well kept; and the walls, inside and out, are wholly overgrown with ivy, trimmed, and leaving apparent the true outline of the stonework, even the lancet forms of the narrow windows being clearly traceable. The ruin, foliage-bound, and presenting, with its three high pitched gables, a characteristic outline, well defined, but softened by projecting stray leaves, viewed against the light of the descending sun, the golden rays streaming through the openings, is truly picturesque and beautiful. The building consists of two parts—the church and the chancel, divided by a chancel arch. The church measures 44 feet in length by 16 feet 3 inches in width inside the walls; and the chancel 29 feet 3 inches in length by 19 feet 6 inches in width. The total length of the building over the walls extends to 82 feet, and its width at the church is 21 feet 9 inches, and at the chancel 25 feet. The side walls of the church measure 7 feet 6 inches, and those of the chancel 10 feet in height above the present turf floor; but the original floor was several feet below the present surface. The opening of the chancel arch measures 9 feet 10 inches in width, 6 feet 9 inches from the turf floor to the top of the impost capital, and 13 feet 6 inches to the apex of the pointed arch. In the west gable of the church is the entrance doorway, which has a semi-circular arched top. Over it is a narrow lancet-topped window,

and on the apex of the gable is a bell turret. The east gable is pierced by three narrow lancet-topped windows. The dressings of the door and window spaces are hewn and chamfered. The chancel arch is a pointed one, and its ring is double chamfered. On the jambs of the archway are formed round pointed edged, shafts, having capitals, the necks of which are bell-shaped and their upper members are semi-octagonal on plan. Over the chancel arch the wall is carried up to form the west gable of the chancel. The walls are built of whinstone, and the dressings are of millstone grit. The style of the building is early English, some members of the capitals of the chancel arch shafts being allied to Norman work. A glance is sufficient to discover that this little parish church had its origin in pre-reformation times. There is, well marked, the arrangement and division of it, suitable for the service of the old religion—church and chancel. The architectural character of the edifice indicates considerable antiquity, the forms exhibited being common in buildings belonging to the end of the 12th and the early part of the 13th centuries. The church of Buittle is mentioned as early as 1297, when Master Richard de Havering, clericus, had letters of presentation to the Church of Botel, vacant, and in the gift of the King, addressed to the Bishop of Candida Casa. The church, the remains of which are before described, is probably the same building to which Richard de Havering was presented by Edward I. of England. In this same building also we may suppose the pious Lady Devorgilla often worshipped when residing at her neighbouring castle of Botel (from whence she dated her statutes relating to the endowment of Balliol College, Oxford, in the year 1282), as did also her son John Balliol, King of Scotland, and the subsequent Lords of Galloway, the Earls of Douglas. The church was dedicated to St. Colmonel. It was probably granted, as was that of Kirkennan in 1275, by Lady Devorgilla to the Abbey of Sweetheart, as there is mention of it being regranted by her successors in the Lordship of Galloway to that Abbey, and in which connection it continued until the passing of the Annexation Act in the year 1587. The old church of Buittle is worthy of being better known than it appears to be. It is a fine specimen of an ancient Scottish parish church, rare at least in this district, and as a landmark of history it is interesting and valuable.

Leaving the churchyard the party directed their steps towards Munches, over Kirkennan hill, and through Kirkennan wood, which was strewn with fallen trees, the effects of the severe storms of the winter 1882-83. Arriving at Munches about 5.30, they were met by Mr Maxwell and Mrs Maxwell, and most hospitably entertained, as the other party had already been. After luncheon the gardens and policies were inspected.

On the motion of Dr Grierson, seconded by Rector Chinnock, a vote of thanks was accorded to Mr and Mrs Maxwell, and to Mr Wellwood Maxwell, for the hearty reception given, and the kindly interest taken in the Society. Having bade adieu to Mr

Maxwell and family, the party returned to Dalbeattie in conveyances, which had been ordered to meet them, and arrived in Dumfries shortly after eight o'clock.

The following is a list of some of the rarer plants met with during the day:—*Helianthemum vulgare*, *Drosera rotundifolia*, *Arenaria serpyllifolia*, *Hypericum quadrangulum*, *H. humifusum*, *Orobus tuberosus*, *Genista tinctora*, *Peplis portula*, *Parnassia palustris*, *Carum verticillatum*, *Helosciadium inundatum*, *Galium palustre*, *Gnaphalium dioicum*, *G. sylvaticum*, *Senecio sylvaticus*, *Crepis paludosa*, *Campanula latifolia*, *Pyrola media*, *Veronica scutellata*, *Calamintha Clinopodium*, *Anagallis tenella*, *Triglochin palustris*, *Gymnadenia Conopsea* (pink and white varieties), *Habenaria viridis*, *H. bifolia*, *H. chlorantha*, *Narthecium ossifragum*, *Carex flava*, *C. binervis*, *C. Stellulata*, *Briza media*, and *Selaginella Selaginoides*.

BRIG HOUSE BAY AND BORGUE.—1st August, 1885.

The fifth Field Meeting was held on the above date, and, like the preceding ones, the excursion was again favoured with fine weather. Starting from Dumfries by the morning train for Tarff Station, where they were met on arrival by Mr Coles and some Kirkcudbright members; the party proceeded thence in waggonettes through the fertile parishes of Twynholm and Borgue to the Bay, noticing as they passed an old Roman fort on the farm of Boreland of Borgue. This part of the shore was visited on a former occasion by the Society, when the Bone Cave of Borneess was then explored. Now the party were contented to botanise along the heights and the cliffs; and the few who had not explored the cave on the former visit, did not feel inclined to undertake the dangerous task of doing so on this occasion. After spending several hours in this way they re-assembled at the farm house of Southpark, where they were entertained to luncheon by Mr and Mrs Coles. Along the sandy margin of the bay were found *Linum perenne*, *Eryngium maritimum*, *Erodium cicutarium*, *Salsola Kali*, *Salicornia herbacea*, and *Cakile maritima*. Near the Borneess Cave the small broad-leaved Centaury, *Erythraea centaurium*, var. *capitata* was found. The rest-harrow, *Ononis arvensis* (red and

white flowered), flourished in the bay; and in the adjoining bay (Falbogue Bay) *Ononis spinosa* was found in abundance. *Orchis pyramidalis* was now first recorded from this locality. In addition to the above, the following plants were found:—*Arenaria serpyllifolia*, *Thalictrum majus*, *Aster tripolium*, *Anagallis arvensis*, *A. tenella*, *Atriplex Babingtonii*, *Anchusa arvensis*, *Malva moschata*, *Helosciadium nodiflorum*, *Astragalus hypoglottis*, *Hypericum hirsutum*, *H. dubium*, *Serratula tinctoria*, *Geranium sanguineum*, *G. pratense*, and *Thalictrum majus*, var. *flexuosum*.

BURNSWARK CAMP.—5th September, 1885.

The last Field Meeting was held in the Annandale District, when it was arranged to visit an outcrop of the Silurian rock in the grounds at Castlemilk, proceed thence to Burnswark Camp, and, if time would permit, visit Birrens Camp. A party of thirty left Dumfries by the 11.5 A.M. train for Lockerbie, and on their arrival, they were met by Mr G. Johnstone, who was to conduct the party. Having taken their seats in two waggonettes, they drove through Lockerbie, passed the pretty village of St. Mungo, and halted for a short time on the bridge over the Milk to obtain a view of that picturesque spot. Continuing the drive until Castlemilk was reached, the party alighted there, and inspected the gardens and the site of the old Castle. Under Mr Johnstone's guidance they walked along the bank of the Milk for about half-a-mile, until they arrived at the outcrop, or where the Old Red sandstone and the Silurian formations meet at the surface. The President, Dr Gilchrist, having described the different formations, they returned to the machines, and proceeded on their way to the Camp, halting, however, at Cowdens Old Quarry to enable the geologists to obtain specimens of the Old Red of that district. Burnswark Camp was reached about two o'clock, and here two hours were spent in examining the different encampments and enjoying the delightful view of the surrounding country.

An adjournment was subsequently made to an old quarry on the southern side, where a short business meeting was held. The Secretary read a short description of the Camp, which had been furnished by Mr J. Lennox. According to Mr Lennox's

notes, the summit of the Camp is 900 feet above sea-level, and appears at a distance, or when seen from below, to be a flat expanse, but in reality it is composed of three different crests running from N.E. to S.W. British camps were undoubtedly there, and the remains of one, measuring 150 feet by 100, may still be traced. The Great Camp, which is on the south eastern slope of Burnswark Hill, measures 750 feet in length and 375 in width, while Gordon mentions that it is 834 feet by 492 feet. It is surrounded by a single ditch and parapet, except at the northern angle. Five gateways are still apparent, and Mr Lennox thinks that a sixth existed. On the north eastern rampart, 160 feet from the north corner, was the *Porta Praetoria*, 45 feet in width. Opposite to this entrance was the *Porta Decumara*, on the south-western aspect of the Camp, and of the same size. In the north-west line of the rampart there were three gateways, equi-distant from each other; the outer ones measured 40 feet, and the central one 60 feet in width, and each was guarded by a tumulus about 40 feet distant. The Roman Camp on the N.W. slope of the hill is not so well preserved, and according to Mr Lennox "it is rectangular in shape, and measures 792 feet from north-east to south-west, and 268 feet from south-east to north-west. The south-eastern parapet faces the ascent of the hill. It is not a straight line, dipping as it does somewhat inwards so as to form a wide angle a third of the way from the south corner. At this inflection there is a gate 30 feet in width, protected by an oval-shaped tumulus and ditch. The north-east rampart consists of stone and earth, and is broken 113 feet from the north corner by a doorway 30 feet wide. Gordon estimates that this Camp would hold 2700 foot or 1000 horse. . . It is not impossible that the north-west Camp at least, if not both encampments, were first formed by those who took part in Agricola's second summer expedition, and that subsequently they were occupied and altered by the troops fighting in the time of Hadrian. The position was, in short, not a temporary one, but was frequently employed as a basis of operations."

Mr Johnstone pointed out at the principal Camp an excellent spring, which would be sufficient to supply the wants of the Roman soldiers. He stated that shortly after that property had been acquired by Mr Jardine, M.P., a quern was found in the Camp. It was carried to Castlemilk, where it now lies, and is a very perfect specimen of the kind. The President

described the nature of the trap rock, and referred to the other formations of which this unique hill is composed.

As rain now began to fall, the party returned to the machines, and the concensus of opinion having been taken, it was agreed to return to Lockerbie, and leave for Dumfries by an earlier train, abandoning the intention of visiting Birrens Camp on this occasion.

Owing to the excursion having been arranged more for the antiquarians and geologists than the botanists, very few plants were collected. The Tway-blade, *Listera ovata* was very abundant in the wood at Cowdens Quarry, and the following plants were obtained at the pond near Burnswark:—*Ranunculus Flammula*, *R. trichophyllus*, *Cardamine pretensis* (late in flower), *Hypericum dubium*, *Epilobium palustre*, *Galium palustre*, *Scabiosa succisa*, *Veronica scutellata*, *Myosotis collina*, *Potamogeton natans*, and *P. pusillus*.

FIELD MEETINGS, 1886.

KIRKCONNELL WOODS AND NEWABBEY.—1st May, 1886.

The first Field Meeting of this session was held on the above date, when a party numbering 18 met at the Fountain at noon, and proceeded thence in waggonettes to Kirkconnell, permission having been granted by R. M. Witham, Esq., to botanize in the woods adjacent to the shore, and to examine the old granite quarry on his estate. On arriving at Whinnyhill, they were joined by Mr Symington, who had promised to act as guide for the day. At Kirkconnell, Mr Witham's gamekeeper met and conducted them through the Old Tower, some rooms of the old house—which is one of the oldest inhabited houses in Scotland—and showed several old swords and portions of armour that had been found in the Kirkconnell Moss. Having examined these interesting objects, the party wandered leisurely through the woods and along the shore until the old quarry was reached, where a halt was made and a short business meeting held—Mr Neilson presiding. The Secretary reported that the Committee had arranged to hold the June excursion in the neighbourhood of Lochmaben, and to meet the Scottish Natural History Club there. He also informed the meeting that a set of Pont's Maps of Dumfriesshire and Galloway had been offered to the Society, and that the Committee were negotiating as to purchasing the same for £5, subject to the approval of this meeting. It was agreed to purchase the maps at the above-named sum. The Secretary subsequently exhibited and described the plants which he collected, but as the season was later than last year only the ordinary spring flowers had been found, the rarest being *Vinca minor* and *Chrysosplenium alternifolium*. Having spent an hour in the quarry, they continued their walk along the shore and adjoining fields until the Abbot's Tower, on the farm of Landis, was reached. This is a square stone tower, now roofless, with its walls covered with ivy; and no one present was able to impart any information respecting it, except what is expressed in the name. After visiting Sweetheart Abbey, the party adjourned to the Commercial Hotel, where tea was partaken of, and at six P.M.

they resumed their seats in the waggonettes for the homeward journey by way of St. Quern's Well, Cargen, reaching Dumfries shortly before eight o'clock.

LOCHMABEN AND BRUCE'S CASTLE.—*5th June, 1886.*

The second Field Meeting was held on the 5th June, when, according to arrangements, it was made a joint excursion with the Scottish Natural History Club, Edinburgh. About forty Dumfries members left by the 11.15 train for Lochmaben, and on arrival they were joined by others from that district. As the Edinburgh Club was not expected until 1.30, the party decided to visit Wood Castle, an old Roman camp about a mile distant, and the botanists could have an opportunity of exploring the adjoining marsh, and the two small lochs near the station. Having met the Edinburgh Club, and being re-inforced by fifteen other members who came by a later train, the party proceeded to the Town Hall, where several interesting antiquities were exhibited by Mr Rae, S.S.C., including the town's records, and some old instruments of torture. From here they went to the schoolhouse, where Mr Clark showed some fine geological specimens, a spear head, and several relics of the lake dwelling which he had "fished up" in the Castle Loch. Arriving at the Castle Loch, the majority crossed it in five boats, while the timorous members preferred walking around it to Bruce's Castle. Having assembled in the centre of that old and noble ruin, a short business meeting was held, when Dr Grierson presided, and welcomed the members of the Edinburgh Club to this district. Mr Craig Christie, F.L.S., secretary of the Edinburgh Club, read letters of apology for absence from the President and Vice-President of that Society, and expressed the pleasure on behalf of the members present, which they had in visiting that interesting and historical district. The local secretary read a letter from the Rev. W. Graham, expressing regret at not being able through indisposition to conduct the party as he had kindly promised to do. Mr Graham, however, contributed important details respecting the excursion, and with the assistance of Messrs Rae and Clarke, it was in every respect successful.

Having spent two hours in examining the ruins, botanizing on the island, and dragging the loch for water plants, they again

re-crossed the loch to the landing stage, and subsequently visited the two old bells in the parish church. [For a detailed description of Bruce's Castle see Transactions, Session 1883-84.]

In reference to these bells, Mr J. Barbour, Vice-President, supplies the following note :—

There are two bells in the tower of the church, only one of which is inscribed. This one measures 21 inches in height, and 12 inches diameter at the shoulder, and 19 inches at the mouth. Immediately under the shoulder two raised lines, $\frac{5}{8}$ inch apart, pass round the bell, forming the upper margin of the inscription space, which is $1\frac{1}{2}$ inch in breadth; and the lower margin is formed of two similar lines. The lip-moulding is a semi-torus with a fillet over it, between which and the lower margin of the inscription belt the body of the bell forms a hollow curve, increasing in flatness as it rises. The bell is not otherwise ornamented except by the inscriptions; it has a plain appearance, and cannot be said to be of elegant form or fine workmanship. In these respects it is much inferior to the Holywood bell and the Carlyle bell in the Observatory Museum. There are two inscriptions. The upper one, with two crosses, which may be taken one as the beginning and the other as the end, extends quite round the bell in the space between the margin lines before mentioned; and the lower one, which is immediately over the lip-moulding, is arranged—two letters on the north side of the bell, two on the south, two on the east, and two on the west sides. The letters are of a character usually called Saxon; they are raised, and every letter is upon a separate small square slightly projecting beyond the surface of the bell. The letters are delicate and ornamental, the crosses particularly so, and the inscriptions appear more artistic than the bell itself. The inscriptions run thus (only not, as here, in Roman characters):—+ TICEFEMMADASEXNAHOI +; and, on one side, AI, another RA, the third ME, and the fourth VA. One peculiarity of the upper inscription is that there is no separation of the several words of which it is composed, and there is a second, which applies to both inscriptions—they read backwards from right to left, and the letters themselves are reversed. The upper inscription, reversed and separated into words, reads—+ IOHANNES ADAM ME FECIT +; and the lower, when reversed and arranged, AVE MARIA. I understand this bell is referred to in the Antiquarian Society of Scotland's publication. No doubt the bell is an ancient one. The companion bell, which is uninscribed, has not received sufficient notice. A careful comparison will, I think, show that the two bells are by the same maker and of the same age. The uninscribed bell measures 18 inches in height, and 12 inches diameter at the shoulder, and $21\frac{3}{4}$ inches at the mouth. Two lines run round the shoulder, of less breadth than on the other bell. The fillet of the lip-moulding differs slightly from that of the inscribed bell, and the hollow of the body is much greater in this case, owing to the greater diameter at the mouth. From the shoulder upwards the two bells are exactly alike, the form being an ogee terminating in a flat top, from which the loops spring for securing the bell to the axle. The provision for hanging consists of a centre pillar, oblong on plan, with a semi-pyramid projecting on each side and resting on the

level top of the bell, and six loops showing a twisted rope-like surface, two on each side, one in front, and one at back, springing from the level top of the bell and curving over to the centre, and together producing the form of a crown. These attachments are identically alike on the one bell and the other. The difference of the two bells as to dimensions and form would be required in order to produce the desired variation of tone; and their minute points of resemblance prove, I think, that they are the work of the same maker. Both, I understand, hung in the old pre-reformation church of Lochmaben, St. Magdalene's, which was burned in a Border fray between the Johnstones and Maxwells.

Leaving the Church, the party ascended the Castle hill, and examined the site of the old castle, not a trace of which could now be seen. Here they arranged themselves in a group, and were photographed by a member of the Edinburgh Society, prior to their departure by the six o'clock trains for their respective destinations.

The following plants were found during the day, some of which were not yet in flower:—*Arabis thaliana*, *Barbarea vulgaris*, *Draba verna*, *Peplis portula*, *Galium cruciatum*, *Sherardia arvensis*, *Menyanthes trifoliata*, *Orobanche major*, *Lycopus europæus*, *Myosotis versicolor*, *Polygonum amphibium*, *Callitriche verna*, *C. hamulata*, *Myrica Gale*, *Salex pentandra*, *S. viminalis*, *S repens*, and *Alisma plantago*. *Botrychium Lunaria* was abundant on the site of the old castle.

In reference to the entomological finds, Mr W. Lennon states that he found *Cicindelide*, the *Dytiscide*, and *Staphylinide* all very scarce. By sweeping along the sloping banks of the railway, and round the margins of the Castle Loch, the following species may be noted:—*Anchomenus marginatus*, *Amara consularis*, *A. Spinipes* and *A. acuminata*, *Harpalus ruficornis*, *Bembidium rufescens*, *Haliphus flavicollis*, *Necrophorus ruspator*, *Silpha thoracica*, *Byturus sambuci*, *Coccinella hieroglyphica*, *Chilocorus bipustulatus*, *Exochomus nigromaculatus*, *Cryptohypnus dermestoides*, *Corymbites metallicus*, *Telephorus rusticus*, *T. nigricans*, *T. limbatus*, *T. pallidus*, *Phyllobius viridicollis*, *Erirhinus nereis*, *Baris t-album*, *Apion cerdo* (rather rare), *Phlæophthorus rhododactylus* (not common), *Donacia simplex*, *Galeruca sagittarice*, *Hyperaspis reppensis* (not common), *Cassida flaveola*.

MORTON CASTLE, GATELAW BRIDGE, AND CRICHOPE LINN.

3d July, 1886.

The third Field Meeting was held in the Thornhill District on the above date, when a party numbering thirty-six left Dumfries station by the morning train. On arriving at Thornhill they were joined by Dr Grierson and eight other members, and proceeded immediately in waggonettes to Morton Castle. From the Castle they walked to the ruins of Morton old church, and this interesting building was described by Rev. Mr Oswald, who also gave a short account of its history.

Resuming their seats in the conveyances they proceeded to Crichope Linn, without calling at Gatelaw Bridge Quarries. Several hours were here spent in rambling through the woods and enjoying the scenery of that romantic glen, but very few botanical "finds" were made. The party returned to Dumfries by the 7.30 p.m. train from Closeburn. In the unavoidable absence of the Secretary, Mr T. Brown conducted the party.

KIRKCONNELL LEA AND BIRRENS CAMP.—*7th August, 1886.*

The fourth Field Meeting was held in the Annandale district, when a party numbering 22 left Dumfries by 9.15 A.M. train for Lockerbie. On arrival, they were joined by two other members, and proceeded in conveyances to Ecclefechan, where a halt was made for a short time to permit those who had not seen Carlyle's house to visit it. After duly examining all that could be seen, the drive was continued to Kirtlebridge, and from there the party proceeded on foot up the beautiful and romantic glen through which the Kirtle Water flows, as far as "Fair Ellen's Bower." An obliging forester conducted the party thence to the spot at which "Fair Ellen of Kirkconnell Lea" was shot, and also to her grave. Having botanized for a couple of hours in the glen, the old Churchyard of Kirkconnell was next visited, where there are several old and curious tombstones. Returning to Kirtlebridge, the drive was continued to Merkland Cross, which stands near the roadside, not far from the village of that name. This cross is octagonal at the base, tapering to the top, and measures 9 feet high. It is supposed to have been erected in

1483 to the memory of Maxwell, the Warden of the Marches, who, after a victorious skirmish with the Duke of Albany, was assassinated on that spot. Time did not permit the party proceeding to Woodhouse Tower, but Birrens Camp was visited on the return journey.

At "Fair Ellen's Bower" a short business meeting was held—Mr Neilson presiding—when Mr A. Hair, Durisdeer; Mr A. Jardine, Thornhill; Mr Graham, Ecclefechan; and Miss Morgan, Dumfries, were admitted new members. Letters of apology for absence from the President and Secretary were read by Mr Davidson, who, in the absence of the latter, conducted the party.

Mr J. Shaw supplies the following note respecting the botanical finds:—Plants found in the woods round "Fair Ellen's Bower:"—*Paris quadrifolia* (luxuriant, some with five leaves), *Lysimachia nemorum*, *Sanicle europæus*, *Hieracium sylvaticum*, *Hieracium murorum*, *Hieracium boreale*, *Apargia hispida*, *Aparga autumnalis*, *Hypochaeris radicata*, *Crepis virens*, *Crepis paludosa*, and *Circea lutetiana*. In the old Kirkconnell Churchyard a small tree of *Berberis vulgaris* was gay with drooping berries. The Churchyard at Ecclefechan was bright with *Galium verum* and *Campanula rotundifolia*. Around a pond at the entrance to Springkell were beautiful specimens of *Lythrum Salicaria*. On Birrens Camp *Hieracium Pilosella* was still in bloom, while our thistles and bedstraws were well represented.

ANNAN AND BRYDEKIRK.—4th September, 1886.

The last Field Meeting of the Session, like the preceding ones, was held under very favourable circumstances on the above date. Owing to many members being away for holidays, only sixteen left Dumfries at the hour appointed (11.45), and on their arrival at Annan they were joined by Mr F. Miller, who had kindly consented to act as guide, and Mr D. Watt. After examining a collection of old coins in the possession of Mr Moffat, the party proceeded to the Town Hall, where a number of interesting objects were inspected. The old churchyard adjoining was next visited, and here half-an-hour was spent in deciphering the inscriptions on old tombstones. The old castle of Annan

formerly stood on the site now occupied by the Town Hall and the churchyard, but of this building not a trace could be distinguished. There is, however, a large stone built into the boundary wall of one of the adjacent gardens, bearing the following inscription:—"Robert De Brus, Counte De Carrick, et Senieur De Val De Annand 1300." This old castle was the scene of many border frays, and on more than one occasion it was plundered. In 1332, shortly after Edward Baliol was crowned at Scone, the nobility of the South of Scotland were summoned to Annan Castle to do him homage. On this occasion the castle was attacked in the night by Archibald Douglas, who killed the guards, and took Baliol's brother Henry with many of his supporters prisoners. In the confusion Baliol escaped to Carlisle, and found a temporary refuge there with Lord Dacre.

Leaving this part of the town, the party adjourned to Mr Watt's residence, where they were entertained to luncheon, and had an opportunity of examining some interesting objects.

The house in which Edward Irving was born was next visited, and also that of Hugh Clapperton, the African traveller.

From here the party drove to Brydekirk to inspect an old fort which is situated on the farm of Brydekirk Mains, halting on the way to examine the Corsehills quarries. At Brydekirk the usual business meeting was held—Dr Grierson presiding—when Messrs J. M'C. Arnott and F. Miller were elected members. The Chairman intimated that the Committee had decided to hold a *conversazione* in the end of October, and suggested that the members in the meantime should look out local objects of interest only for exhibition.

After awarding votes of thanks to Messrs Miller and Watt, the party walked along the banks of the river to the town, and returned to Dumfries by the 8 o'clock train.

Only the usual autumn flowering plants were collected, no rare finds having been made.

A P P E N D I X .

REPORT OF SUB-COMMITTEE ON THE ACQUISITION OF THE NEW ROOMS,

Read 8th January, 1886.

At a special meeting of the Society, held on the 22d May, 1885, it was unanimously agreed to proceed with the scheme for acquiring the occupancy of the Presbytery House on lease for a term of years. A sub-committee, consisting of Dr Gilchrist, and Messrs Starke, Barbour, Lennox, Watson, and Wilson, was then appointed with full power on behalf of the Society, to make and complete the necessary arrangements, provided they should first obtain the promise of £60 towards the expense to be incurred before commencing operations.

Since that date your sub-committee have met frequently, and, as arrangements had to be made between the Synod, Presbytery, Kirk-Session, and Town Council of Dumfries, their completion has been naturally tedious.

We now beg to report that we have entered into an agreement with all the parties interested in the Presbytery House, and that the document has been duly signed by Mr Starke on behalf of this Society, and by representatives of the different bodies already-mentioned.

To give the minute of agreement here would occupy too much space, but it is copied in full in the minute book, and the following points form a résumé of it:—It is agreed that this Society have the free use and occupancy of the Presbytery House for fifteen years from Whitsunday, 1885, at the nominal rent of two shillings and sixpence per annum. The Synod, Presbytery, and Kirk-Session have the right to the use of the building for their meetings as heretofore; and neither of the parties to the agreement has the privilege of sub-letting the building. The repairs and furnishings have been made at this Society's expense. The Presbytery has the power of terminating the lease on giving notice in writing, provided that the Presbytery pays to the Society a sum equivalent to all the expenses incurred by the Society on the building and during the term of occupancy, less five per cent. per annum for depreciation. In the event of the Society vacating the building, one table and forty-two chairs are to be left, and these then become the Presbytery's property.

When the sub-committee was appointed their first object was to ascertain the probable cost of repairing the building, and subsequently to be guided in the furnishings as funds permitted. Mr Barbour gave a detailed estimate of the repairs needed, showing that £60 were at least required for the fabric, and the furnishings would have to be provided extra. This seemed like throwing cold water on the scheme, but it was soon dispelled by the enthusiasm of the oldest and most energetic members of the Society, including our late President—Dr Gilchrist—whose death we now so deeply mourn.

As instructed, a circular was issued to ladies and gentlemen interested in the Society's doings, and this met with a liberal response from some; but, as you are aware, the greater portion was obtained by the Subcommittee waiting upon members or their friends. It is very gratifying to state that the total sum thus raised, including the Presbytery's donation, amounts to £103 3s 9d.

[Instead of giving here the list of the names of subscribers submitted to the meeting, we purpose giving only the amount subscribed and expenditure incurred to 5th November, 1886, when the accounts were closed.]

R E C E I P T S.

Donation from Presbytery of Dumfries	£20	0	0
Presbytery of Dumfries, half cost of Legal Expenses	1	9	9
Subscriptions from Members and Friends of the Society	84	7	0
Surplus from Summer Excursions—Years 1885 and 1886	0	11	6
Cash from Ordinary Account	7	1	1
Total	£113	9	4

E X P E N D I T U R E.

Mr Crackstone for Building, per Estimate... ..	£59	0	0
„ Painters' and Glaziers' Work	8	15	8
„ Gasfittings	7	3	9
„ Large Table and Case	14	10	0
„ Small Table and Stand	1	19	0
„ Grates and other Fixtures, &c.	6	3	1
Messrs Burgess & Stobie for Chairs... ..	10	11	6
Messrs Stark & Thomson, Legal Expenses	2	19	6
Mr Thompson, Fireguards	0	6	0
Mr M'Lean, (Subscription exchanged for Clock)	0	10	0
J. Brown, extra attendance, &c.	0	10	0
Printing of Circulars	0	9	6
Secretary's Outlay (Postage and Coals)	0	11	4
Total	£113	9	4

“ 5th November, 1886.—Audited and found correct.—(Signed) M. M'INNES.”

At a meeting of the committee, held on the 30th October, 1885, the sub-committee were empowered to draw on the ordinary account to the amount of £15, but of this sum only £7 1s 1d is needed to discharge all accounts, and by taking that sum your sub-committee have discharged the duty with which they were entrusted, and that too in the best interests of the Society.

In conclusion, we wish to mention Mr Barbour's gratuitous official services in superintending the operations, and to express our thanks to the 125 subscribers for the handsome way they have responded to our call.

J. GIBSON H. STARKE, V.P.

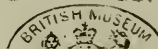
JAMES BARBOUR, V.P.

JAMES LENNOX, Treasurer.

T. WATSON.

J. WILSON, Hon. Secy.

8 JUN 1887



19 OCT 1898

THE TRANSACTIONS

AND

JOURNAL OF PROCEEDINGS

OF THE

DUMFRIESSHIRE AND GALLOWAY

Natural History & Antiquarian Society.



SESSION 1886-87.

PRINTED AT THE COURIER AND HERALD OFFICES, DUMFRIES.

1888.

No. 5.

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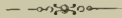
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1888.

“ How charming is Divine Philosophy !
Not harsh, and crabbed, as dull souls suppose,
But musical as is Apollo’s lute,
And a perpetual feast of nectar’d sweets,
Where no crude surfeit reigns.”—*Milton*.

“ Is it not desirable to call the soul from the feverish agitation of worldly pursuits to the contemplation of the Divine Wisdom in the beautiful economy of Nature ? Is it not a privilege to walk with God in the Garden of Creation, and hold converse with His Providence ? . . . The more we study the works of the Creator, the more wisdom, beauty, and harmony become manifest, even to our limited apprehensions, and while we admire, it is impossible not to adore.”—*Sir J. E. Smith*.

SESSION 1887-88.



COUNCIL.

President.

T. B. GRIERSON, M.D., Thornhill.

Vice-Presidents.

H. G. BOWDEN, Esq., Major.
F. R. COLES, Esq.

W. J. MAXWELL, Esq.
ROBERT MURRAY, Esq.

Hon. Secretary

J. WILSON, 3 Norfolk Terrace, Dumfries.

Assistant Secretary.

ROBERT BARBOUR, St. Christopher's, Dumfries.

Treasurer.

JAMES S. THOMSON, 75 Plainstones, Dumfries.

Other Members.

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JAMES BARBOUR.
J. DAVIDSON.
A. INNES.
T. LAING.

JAMES LENNOX.
J. NELSON.
T. SHORTRIDGE.
J. GIBSON H. STARKE.
T. WATSON.

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PROCEEDINGS AND TRANSACTIONS
OF THE
DUMFRIESSHIRE AND GALLOWAY
NATURAL HISTORY AND ANTIQUARIAN
SOCIETY.

SESSION 1886-87.

1st October, 1886.

ANNUAL MEETING.

Dr GRIERSON, President, in the Chair. Twenty-three members present.

New Member—Mr W. J. Maxwell of Terraughtie, Dumfries.

Donations.—The Secretary laid on the table the 5th Annual Report of the United States Geological Survey; the Annual Report of the Smithsonian Institution for 1884; Report of the Peabody Museum, 1885, as donations from the Smithsonian Institution; and two numbers of the *Phytologist* containing lists of local hepatics and mosses from Mr Peter Gray. A land-rail (*Crex pratensis*) from Mr W. J. Maxwell, Terregles Banks.

Exhibits.—Mr George Johnstone exhibited two pieces of the sandstone rock from Corschill Quarry, near Annan, in the shape of a man's foot and leg, and remarked that they were of this shape when quarried. The Chairman explained that he believed these two curiously shaped stones to be the casts of plants, &c., formed at the time of the deposition of the rock by the removal of the original substance, the sand filling the vacant places. There were no characteristic markings to enable the determining of the species. The Chairman exhibited several specimens of the Cotton Moth, which had been sent him by Dr Grant *Bey*, of Cairo. This moth (*Earias Insulana*) was first discovered in Madagascar, and is known to be very destructive to the cotton

crops in the old world. He also exhibited several contorted stones resembling fishes, and said they were due to the same causes as the specimens exhibited by Mr Johnstone.

SECRETARY'S REPORT.

The Hon. Secretary (Mr J. Wilson) submitted the following report :—The Secretary's annual report for the session which has now closed may be considered of some importance, as it gives a general statement of the present Society's doings for the 10th year of its existence, and forms a good indicator of its life and utility.

At the Annual Meeting last year our membership numbered 190, comprising 5 life, 165 ordinary, and 20 honorary members. Since then 11 names have been taken off the roll—3 members having died, 1 resigned, and 7 removed from this district; and 34 new members' names have been added, which make a net total of 213, being the largest number on record, and now includes 5 life, 187 ordinary, and 21 honorary members.

In addition to the seven ordinary Winter Meetings and the five Field Meetings, four special ones have been held, at which lectures on subjects within the scope of the Society were given. At the ordinary Winter Meetings 15 papers by different members were read and discussed, the majority of which were confined to special subjects relating to the Society's field of action. These papers are of great practical value, and the writers thereof deserve commendation for thus advancing the aims of this Society by investigating the local antiquities, as well as recording the Flora and Fauna of the district. In addition to hearing papers read at these meetings, members had an opportunity of inspecting many rare exhibits, which formed an interesting feature in the programme. The five Field Meetings proved both instructive and enjoyable to the members and their friends who took part in them. One of these requires special notice, for on the 5th June a joint excursion of the *Scottish Natural History Club* and this Society was held at Lochmaben, at which there were more than 50 members present.

The average attendances at these meetings were 33·1 for the winter and 29·4 for the summer—the former being larger than last year's and the latter slightly under, those being 32·1 and 30·1 respectively. These figures may be regarded as very small considering the number of members in the Society, but owing to so

many living at a distance, the stormy weather, and numerous other meetings occurring on the same dates, they may be regarded in a favourable light.

There were eleven Committee meetings held during the session, all of which were well attended.

The Sub-Committee which had been appointed in session 1884-85 to make arrangements respecting the Presbytery House, completed their task to the Society's satisfaction. On the 2nd October, 1885, the Annual Meeting was held in this building, which the Society now holds on lease for 15 years at a nominal rent. In my last report I expressed the hope that the expense incurred would be defrayed without drawing on the ordinary funds of the Society. This hope would have been realised had the Committee confined their operations to the repairs, &c., proposed, but as the work proceeded, further improvements were made. It is, however, gratifying to know that £83 18s 6d has been raised by private subscriptions, and by adding the Presbytery's donation to this, the balance, as our treasurer will inform us, is not very large.

The Society's specimens, which had been deposited in the Observatory Museum, were removed to this building in January last. Since we purposed forming a collection of local specimens, the donations to this Society have been both important and numerous. It would occupy too much time to enumerate the different articles presented, and as they are all registered in the minute-book, the following notice may suffice. Special mention must be made of Captain Maxwell's donation of five British birds, a stoat, and a hedgehog, and a rarity from New Zealand, the ground parrot (*Stringops Habroptilus*), also his gift to the Library of Buller's History of the birds of New Zealand. The Smithsonian Institution has contributed most handsomely by presenting the annual report of that Institution, the Bureau of Ethnology, and two reports of the United States Geological Survey, &c., &c.; Mr Coles, V.P., presented a collection of land and fresh water shells and 110 specimens of flowering plants; Mr Sam. Chrystie, a collection of bird's eggs; Mr Robinson-Douglas has further presented the Journal of the Linnean Society; Major Bowden, 9 volumes of the Philosophical Journal; Mr Arthur Bennett, F.L.S., a collection of plants for distribution; Mrs Gilchrist, a collection of minerals, Greviella (41 parts), and 3 vols. of the Transactions of the Cheshire Historic Society; the

Glasgow Geological Society, its Transactions to date, and a Catalogue of the Western Scottish Fossils; Mr W. J. Maxwell, a fine specimen of the great buzzard.

The Society has made another valuable addition to its library by purchasing the Micrographic Dictionary, and to its Museum Timothy Pont's maps of Dumfriesshire and Galloway. It purchases "Science Gossip" and the "Scottish Naturalist" periodicals when published.

All the above books and periodicals have been freely circulated among the members, and the more important have been in use since the Society acquired them.

The Proceedings and Transactions of this Society have not yet been published, but they are ready for the printer when desirable.

I have already referred to the death of three members, but this report would be incomplete were I to allow the subject to pass without further notice. The first deceased was our late President, Dr Gilchrist, who had taken such an important part in the founding, not only of this Society in 1876, but of the older one in 1862, and through whose unwearied exertion and zeal, the present Society exists, and for the time, the older Society had its being. Although we miss Dr Gilchrist at our meetings, and especially the field meetings, we shall never forget the kind and encouraging words which he had for every beginner in natural history studies. Mr Adamson, a former treasurer of the Society, took an active part in its affairs since its formation, and when he presented the Annual Balance Sheet his humorous and pithy remarks were always appreciated by the members. Miss Chrystie, who was the first lady member, took a keen interest in Botany, and was always present at our meetings until her failing health rendered this impossible. In these three prominent members the Society has sustained a very severe loss.

On the motion of Mr Robert Murray, the report was cordially approved, and the Secretary awarded the thanks of the Society for his honorary services during the past year.

TREASURER'S REPORT.

The Treasurer (Mr J. Lennox) explained that owing to the large number of subscriptions being in arrear, the Committee had decided that his Annual Report be held over until the November

meeting, and in the meantime he was to employ a collector if it were the wish of the meeting. The Committee's proposal was agreed to.

Election of Office-bearers.—The following were elected the Office-bearers and Members of Committee for the ensuing Session :—President, Dr Grierson ; Vice-Presidents, Messrs J. G. H. Starke, James Barbour, F. R. Coles, and Major Bowden ; Honorary Secretary, Mr J. Wilson ; Assistant Secretary, Mr Robert Barbour ; Treasurer, Mr J. Lennox ; Members of Committee—Messrs W. M'Dowall, J. Rutherford, T. Watson, Robert Murray, J. Neilson, J. Davidson, A. Innes, T. Shortridge, J. W. Dods, and A. Bruce ; Auditor, Mr M. M^rInnes.

Conversazione.—The Secretary intimated that the late committee had decided to hold the proposed *Conversazione* in Greyfriars' large hall on the 27th and 28th October, and submitted their recommendation for approval. It was unanimously adopted, and the new committee were empowered to make the necessary arrangements.

The remainder of the evening was occupied in general discussion on the nature of the *conversazione*, and the objects to be exhibited thereat.

27th, 28th, and 29th October, 1886.

EXHIBITION.

The Exhibition was held in Greyfriars' Halls on the above dates, and proved one of the most important and interesting events in the history of the Society.

A large collection of local objects of Archaeology, Manuscripts, and Portraits was arranged in one half of the larger hall, and the other half was occupied with the Natural History exhibits, which comprised specimens of nearly all the flowering plants, ferns, and mosses, and a representative series of the lichens and fungi. The collections of minerals and rocks of the district were arranged in one corner, while the zoological specimens were fairly well represented. The meeting was opened at 2 P.M. on Wednesday, the 27th, by the President, Dr Grierson, in the unavoidable absence through indisposition of W. H. Maxwell, Esq. of Munches, and remained open until 10 P.M. On Thursday and Friday it was opened at 11 A.M. and closed at 10 P.M.

For full description of Exhibition see Appendix.

5th November, 1886.

Major BOWDEN, Vice-President, in the chair.

Twenty-eight members present.

New Members.—Messrs J. Carlyle Aitken, The Hill, Dumfries; J. Kerr, Blountfield; Wellwood Maxwell of Kirkennan, Dalbeattie; James Turner, Dumfries; and W. Costin, Maxwelltown.

Donations.—Mr Robert Murray presented on behalf of Miss Gracie, Buccleuch Street, six old coins; Mr Barbour, V.P., presented on behalf of Treasurer Hiddleston the old iron belt used in bringing the criminal David Haggart to Dumfries, and which had been recently found in a cellar in Assembly Street; Mr Barbour also presented on behalf of Mr John Bridges the top of the old Incorporated Trades flag-staff. The Secretary laid on the table an old flint pistol found at Rockhall, and presented by Mr John Kerr, Blountfield; a Roman copper coin found at Liverpool, the gift of Mr W. Henderson of that city; also a piece of bronze and two silver coins found at Midtown, Carlaverock, as a donation from Mr James Thomson.

TREASURER'S REPORT.

The Treasurer (Mr James Lennox) submitted his annual report for the past session, that had been postponed from the Annual Meeting, of which the following is an abstract:—

INCOME.		EXPENDITURE.	
Balance from Session		Purchase of Books ...	£2 6 6
1884-85 ...	£19 19 5½	Stationery and Receipt	
Arrears recovered ...	2 7 6	Books... ...	1 2 6
173 Subscriptions at 2/6	21 12 6	Printing... ...	2 17 0
Entrance Fees ...	3 2 6	Pont's Maps ...	5 0 0
Sale of Transactions ...	0 2 6	Bird Stuffing ...	0 5 0
Interest on Bank Account	0 17 2	Secretary's Outlay	
		(Postage, &c.) ...	7 14 1
		Treasurer's Outlay ...	0 19 1
		Gas and Coals ...	0 15 8½
		Removal of Specimens	
		to Rooms ...	0 5 0
		Building Account ...	14 0 10
		Balance in hand at Annual	
		Meeting—	
		Cash in Bank, £7 0 0	
		Cash in hand, 5 15 11	
			12 15 11
			<hr/>
	£48 1 7½		£48 1 7½

"I have examined the books of the Dumfries and Galloway Antiquarian Society, kept by the Treasurer, of which the above is an abstract, and I certify the whole to be correctly stated and properly vouched.

"(Signed) M. M'INNES, Auditor."

The report was unanimously adopted, and the Treasurer awarded the thanks of the Society for his honorary services.

COMMITTEE'S REPORT ON THE CONVERSAZIONE.

The Secretary read a report prepared by the Committee on the recent conversazione, referring to articles exhibited, &c., and acknowledging their indebtedness to the many ladies and gentlemen who had rendered assistance. On the motion of Mr J. S. Thomson, the report was unanimously adopted, and the Committee thanked for their trouble, special reference being made to Mr J. Barbour, V.P., and to Mr J. Wilson, Hon. Secretary. The thanks of the Society were then awarded to the exhibitors, and to the ladies and gentlemen who had assisted with the arrangements, on the motion of Mr M'Dowall.

On the motion of the Secretary, it was agreed that the report be extended so as to include a description of the many exhibits, and that it be embodied in the next part of the Transactions. See Appendix.

COMMUNICATIONS.

I. *Local Ornithological Notes for 1886.* By MR W. HASTINGS.

As far as my observation has gone with regard to our local birds, the most noteworthy incident is the immense sacrifice of life which took place among the swallow tribe shortly after their arrival in this country to spend the summer with us. After they had made their appearance in unusually large numbers, a tract of uncongenial cold weather set in which completely prevented the insects upon which the swallows subsist from stirring abroad, so that the poor birds were starved to death, and were picked up in great numbers throughout the country. I had a great many sent me from the district round about. The common or barn swallow (*Hirundo rustica*) was numerous; the house martin (*Hirundo urbica*) next; and the sand martin (*H. riparia*) fewest in numbers. The swift (*Cypselus apus*), fortunately for himself, did not arrive until more genial weather had set in. Such a mortality among the tribe has never occurred in my time. Early in the month of June I received a fine specimen of the male turtle dove (*Columba turtur*), shot in Tinwald, and later in the month a female of the same species shot in the neighbourhood of Kirkcudbright. The wild turtle is a migratory bird,

and is very irregular in making its appearance in this country, many years passing without one being seen or heard of here. Some years ago I had one sent me which had been shot in the neighbourhood of Sanquhar. In the month of June I had a male puffin or coultarneb (*Fratercula arctica*) sent me from the neighbourhood of Kirkcudbright. It breeds in great numbers upon Ailsa Craig. In the same month I received a fine specimen of the golden eagle (*Aquila chrysaetus*), trapped in Glencoe. It measured about three feet in length, and seven feet in the stretch of the wings. These birds are scarce now, even in their native Highlands. In September I received two oyster catchers (*Hematopus ostralegus*), which had been knocked down and killed, among a great many others, by a tremendous whirlwind that occurred upon the 5th of that month in the neighbourhood of the Brow Well. Many of the birds were dashed against a wire fence, and had their heads cut off almost as clean as if it had been done with a knife. Some of our small birds had their numbers sadly reduced by a severe winter we had some years ago; but they now seem as plentiful as ever. I may also add that in the month of August a curious specimen of the bat, taken in Troqueer parish, was sent to me. It resembles the common bat in its form and colour, but is a full third larger. I am not quite sure of its specific name.

II. *Notes on Local Botany for 1886.* By Dr A. DAVIDSON.

Last year when I had the honour of addressing you I hazarded the opinion that it was probably the last time I would be able to record anything new for this district, but I am happy to say I have again been so fortunate as to make a few new, and I trust, not unimportant additions to the Flora of Dumfriesshire. I almost require to apologise for making so small a record the basis of a paper, but your energetic secretary, rightly desiring all papers to be of local interest, would take no denial. So far as the theory of this principle was concerned, I entirely concurred with him, but I cannot say I quite agreed with the demand for a practical proof of my adherence.

The season has altogether been unfavourable for field botanists. The most severe of winters was followed by a cold spring and a tardy and inclement summer. The coltsfoot flowers opened their petals for a few days in the last week of March, only to close them beneath a fresh snowfall, and not till near the middle of

April were they again seen. The primroses first appeared on April 13; and four days later the first blossoming of the wood anemone, the butterbur, the barren strawberry, and the golden saxifrage were recorded.

The first record of a plant new to the county was made by Mr J. Black. When we were tramping Sanquhar Moor one May evening he plucked what seemed to be a very stout form of the common cotton grass, *Eriophorum angustifolium*. This on examination we considered to be the variety *elatius* Koch, and on referring to Mr Arthur Bennett it was confirmed. I subsequently found it in a few other places, but nowhere so abundant or typical as on Glenmaddie Craig, at an altitude of 1350 feet. Here also I may state I found *Draba verna* and *Cochlearia officinalis*, the former being at a higher altitude here than has, as far as I am aware, yet been recorded. The next in order of time was *Carex Hornschuchiana*, Hoppe, a var. of *fulva*, which is fairly abundant on the moist clayey soils of the higher hills. When this Society visited Lochmaben, two varieties of the creeping willow were gathered. The one was the common var. *S. argentea*; the other var., *S. ascendens*, is new to the district. A fescue I have previously recorded as *Festuca sciuroides*, Roth, I have now determined to be *Festuca Myurus*, Lin. It is not uncommon. The common corn mint, *Mentha arvensis*, so well known about Dumfries, has not been observed in Upper Nithsdale, but is sparingly represented by *Mentha arvensis*, var. *nummularia*. This season I have made special investigation of our Hieracia, or Hawk weeds, and I have no doubt, on fuller investigation, Dumfriesshire will compare favourably with most other counties. In our local list we have only seven species recorded, viz.:—*Hieracium Pilosella*, *H. pallidum*, *H. murorum*, *H. Iricum*, *H. sylvaticum*, *H. umbellatum*, and *H. boreale*. Of these *H. pallidum* has not been found in recent years. Of the remaining six, *Pilosella* and *boreale* are no doubt common. *H. murorum* and *H. sylvaticum*, as far as I have observed, are errors. *H. Iricum* and *umbellatum* are no doubt correct, though the latter must surely be found in other places than Tynron and Sanquhar. In Sanquhar district, of which I can only speak, the following are found:—*H. Pilosella* is common; *H. vulgatum* and *H. tridentatum*, likewise common, have in the local list been named *murorum* and *sylvaticum*. *H. vulgatum*, var. *maculatum*, is not uncommon in the woods near Sanquhar; and *H. umbellatum* grows on the Nith near Knocken-

jig; *H. crocatum* grows near Eliock Bridge along with *boreale*, which is, however, common elsewhere; *H. prenanthoides*, which I found this autumn on Carsrig Burn, is, with *crocatum*, two rare and interesting additions. The Myosotes, or forget-me-nots, are the only other critical species I have carefully observed, of which six are recorded for the county. Of these the early myosote, *Myosotis collina*, may be considered doubtful, and the marsh forget-me-not, *Myosotis palustris*, I have not yet seen. The field myosote, *M. arvensis*, and its var. *umbrosa*, as well as the yellow and blue forget-me-not, *Myosotis versicolor*, are all common. *Myosotis repens*, not previously recorded, is the most common form in the district; while *M. cæspitosa*, only reported from Grey Mare's tail, is fairly abundant in a few places near Sanquhar. *M. palustris*, var. *strigulosa*, found last year at Kirkbog, Thornhill, is also a new record. A large flowered albino variety of *Geum rivale*, the water aven, which some botanists have attempted to designate with the special title of *Geum palladium*, was found in the Holm Wood. A somewhat curious variety of *Poa nemoralis* with smooth glumes, discovered on Kello Water, was submitted to Mr A. Bennett, who considered it closely resembled the var. *glaucaantha*, a rare mountain form of this somewhat variable grass. I think it is similar to the forms of *Poa nemoralis* I have previously gathered on the rocks on the Nith, both at Sanquhar and Drumlanrig woods; but as I have at present no specimen of these with which to make comparison, I must leave its solution to a future season. Of plants new to the parishes of Sanquhar and Kirkconnel the following fall to be recorded: — *Lysimachia vulgaris*, Loosestrife, near Gateside; *Meum athamanticum*, literally covers part of the meadows on Scaur Water; the hemlock, *Conium maculatum*, and *Habenaria viridis*, have also been found. Among aquatics, besides the variety *panormitanus* of *Potamogeton pusillus*, previously recorded, the true *pusillus* has been found at Auchengruth and Kirkconnel, in the latter place accompanied by *P. heterophyllus*, not elsewhere found. On Kello Water the branched burweed, *Sparganium ramosum*, and the filmy fern, with *Vicia sylvatica*, the pencilled vetch and the rare wood vetch, *Vicia orobus*, have found suitable habitats. An exhausting ramble on Enterkin and both the Lowthers yielded results more negative than positive. The alpine club moss, *Lycopodium alpinum*, growing near the entrance to the Pass, and the modest *cowberry* in its plenteous profusion

on the slopes of the reposing Lowthers scarce redeem them from absolute sterility.

I had prior to writing this paper sent a list of plants unrecorded for Dumfriesshire to the "Scottish Naturalist," and those interested will there find nearly 120 additions, some of them, I daresay, well known. I found at that time, while looking over the Cybele Britannica, that therein are recorded a good few plants not yet entered in our local catalogue, and I will here enumerate them in the hope that some of you, either now or hereafter, may correct or verify the record. The authorities responsible for their insertion are only in some instances quoted, but I suppose they are all from the Gray catalogue, with a few exceptions, recorded by Messrs Liddell and Hutton. These are:—*Hutchinsia petraea*, *Reseda luteola*, *Subularia aquatica*, *Vicia tetrasperma*, *Potentilla Sibbaldia*, *Rubus fissus*, *l. affinis*, *R. radula*, *R. humifusus*, *Eupatorium cannabinum*, *Lamium intermedium*, *Myosotes sylvaticum*, *Trientalis Europæa*, *Centunculus minimus*, *Plantago media*, *Atriplex patula*, *Atriplex erecta*, *Salsola Kali*, *Potamogeton pectinatus*, *Potamogeton lucens*, *Arum maculatum*, and *Avena pubescens*. Of these one-fourth are not uncommon, and have possibly been overlooked, but the remainder are rare and interesting, and I trust some member may ere long discover them.

3rd December, 1886.

Dr GRIERSON, President, in the chair. Thirty-four members present.

New Member.—Rev. Wm. Andson, Dumfries.

Donations.—The Secretary laid on the table a copy of the Chronicles of Lincluden, as a donation from the author, Mr W. M'Dowall. Mr J. Barbour, V.P., presented on behalf of the managers of the Martyrs' Free Church, Dumfries, three communion tokens, two of which are dated 1745, and the third 1780; also, on behalf of Mr John Wilson, Friars' Veuel, a burgess ticket of the burgh of Annan, dated 19th July, 1701, and an interesting document containing a list of the tenants on the estate of the Earl of Nithsdale, from whom rents were to be collected, when that Earl escaped to France for participating in

the rebellion of 1745. Mr J. M'Andrew presented four specimens of parmelia, and a specimen of the dwarf birch (*Betula nana*). Mr J. M'Lellan Arnott presented one of the hand-bills which had been issued in 1820 offering a reward for the capture, and a description, of the notorious criminal, David Haggart.

Exhibits.—The Chairman exhibited two bottles of volcanic dust collected on board ship, about 500 miles from the coast of New Zealand, which had evidently been erupted during the recent great volcanic disturbances in that island. Dr Grierson also exhibited a specimen of the "Galloway Flail," and with it for comparison an ordinary flail. The Galloway flail had been formerly used by the peasantry of the South of Scotland as a weapon of war in "the killing times." The handle of the one exhibited was made of ash and measured five feet, to which was attached the "souple," or the iron portion of the flail, consisting of three joints, each a foot in length. Dr Grierson remarked that he could obtain very little information about this weapon further than it was mentioned by the Rev. Mr Grierson of Sanquhar, in his "Gleanings among the Mountains," as having been used by the Covenanters, and that Sir Walter Scott, in "The Talisman," described a military flail similar to this one.

COMMUNICATIONS.

I. *A Plant of Sphagnum.* By Mr J. M'ANDREW.

In this paper the author described the structure and life history of a plant of sphagnum, and remarked that no observant person could walk through or alongside any bog or moss, such as the Lochar Moss, without noting the variegated and beautiful tints of the sphagnum, or peat mosses, filling the pools, and concealing often the treacherous depths. The order *Sphagnaceæ* contains only one genus, *sphagnum*, with about 60 species, one-third of which are tropical, and only 15 or 16 are British. Of the latter the author has collected in the district of the Glenkens all the species except *S. Lindbergii*, and all the varieties except *S. Acutifolium*, var. *gracile*; *S. strictum*, var. *squarrosulum*; *S. squarrosulum*, vars. *lacum* and *imbricatum*; *S. intermedium*, var. *pulchrum*; *S. laricinum*, var. *platyphyllum*; and *S. tenellum*, var. *longifolium*. In conclusion Mr M'Andrew remarked that the nature of the soil does not seem to have any effect on the number of species and varieties. A dry or a wet season,

and the place of growth must, however, affect their development, density, and size. The colour must be the result of vital action. These colours perceptibly fade when the plants are dry. Almost all species have a tendency to run into two forms—one a dense compact variety caused by the shortening of the internodes, and the other variety having the branches and leaves bent down or squarrose. In the true determination of the species of *Sphagna* almost every point in their structure must be taken into account, and these points are so many that it is difficult to name many of the species, not to speak of the numerous varieties.

II. *A Visit to Birmingham with the British Association.*

By Mr J. SHAW.

In this paper Mr Shaw gave a brief description of the numerous places of interest visited by the Association, and a sketch of the lectures given during the meeting.

7th January, 1887.

Major BOWDEN, Vice-President, in the chair. Twenty-eight members present.

New Member.—Rev. J. M'Farlan, The Manse, Ruthwell.

The Ruthwell Cross.—The Secretary intimated that the committee had adopted the following resolution, and moved its adoption by the Society, viz. :—"That this Society is pleased to learn that the Ruthwell Cross is at last to be protected from the weather, and cordially approves of the action taken by the Rev. Mr M'Farlan and the heritors of Ruthwell Parish, and recommends that the Society contribute three guineas as a donation towards the expense." This was seconded by Mr W. M'Dowall, and unanimously agreed to. The Rev. Mr M'Farlan exhibited and described the plans of the proposed erection, and stated that they had already been approved by the Commissioners of Woods and Forests, and that the Government through the Commissioners contributed £50 towards the expense; one of the conditions being that the Cross should be always accessible to the public free of charge. On the motion of the Chairman, the thanks of the

Society were accorded to Mr M'Farlan for the great trouble he had taken in connection with this interesting and ancient monument.

Midsteeple Buildings.—Mr Barbour, V.P., called the Society's attention to the proposal of the Town Council to alter the apartment in the basement of the Tower. On the motion of Mr Rutherford, Mr Barbour, V.P., Mr M'Dowall, and the Secretary were appointed a sub-committee to memorialise the Town Council on the subject.

COMMUNICATIONS.

I. *Meteorological Notes for 1886.* By Rev. W. ANDSON.

The observations recorded in the accompanying table, and which form the subject of the following remarks, were taken at Newall Terrace, Dumfries, about 60 feet above sea level, and, as is customary, the barometric readings are corrected to 32° F. and for sea-level.

Station—NEWALL TERRACE, DUMFRIES. YEAR 1886.

MONTHS.	BAROMETER.				SELF-REG. THERM. IN SHADE.				RAIN.		
	Highest in Month.	Lowest in Month.	Range (Monthly).	Mean.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean Temp.	Days in which it fell.	Heaviest in 24 hours.	Total Amount.
	Inch.	Inch.	Inch.	Inch.	°	°	°	°		Inch.	Inch.
January	—	—	—	—	51·6	15	36·6	34	25	0·62	4·58
February	30·42	29·12	1·30	29·98	48	16	32	35·9	17	0·40	2·03
March	30·41	29·03	1·38	29·79	68	18	50	40·4	20	0·87	4·13
April	30·28	29·05	1·23	29·77	68	30	38	46·4	15	0·56	1·79
May	*	—	—	—	62	33	29	49	19	0·80	3·81
June	30·36	29·60	0·76	29·94	78	38	40	55·4	11	0·24	0·77
July	30·33	29·29	1·04	29·86	78	42	36	58·3	17	0·55	3·64
August	30·26	29·50	0·76	29·92	71	41	30	57·9	16	0·44	1·91
September	30·46	29·51	0·95	29·96	77	29	48	53	16	1·02	5·79
October	30·47	28·89	1·58	29·80	69	31	38	49·8	20	0·91	4·17
November	30·64	29·13	1·51	29·82	56	30	26	42·1	26	0·80	3·58
December	30·47	27·61	2·86	29·57	51	8	43	32·4	22	0·83	4·43
Year	30·64	27·61	3·03	29·84	78	8	70	46·2	224	1·02	40·63

* Barometer out of order.

Barometrical Observations.—The most remarkable fact in the meteorological record of the year was the sudden and excessive fall of the barometer on the 8th December. On the morning of the 7th it stood at 29·30 in.; at 9 A.M. of the 8th it had fallen to

28.40 in., at mid-day to 28.00 in., and about 6 P.M. it reached the extremely low point of 27.61 in., after which it began slowly to rise till, at 9 P.M., the reading was 27.70 in. The depression moved from west to east—as such depressions for the most part do—and had a very extensive area, embracing all the west of Europe. Readings below 28.5 inches were observed in all parts of the kingdom, but the north of Ireland and England and the south of Scotland appear to have been the centre of the depression. At Belfast the reading at 1.30 P.M. was 27.38 in.; at Dumfries about 6 P.M., 27.60 in.; and at Leith a little later, 27.65 in. This circumstance—of the South of Scotland being in the centre of the depression—is probably the explanation of the fact that, though the barometer fell nearly as low as in the great storm of January, 1884, and in some places even lower, the force of the wind was not nearly so great as in that destructive storm. In these cyclones, as they are called, it is well known that the wind, instead of blowing in a rectilinear direction, whirls round the depressions, and is most violent at some distance from the centre, or area of lowest pressure, which is often comparatively calm. The south of Scotland and north of England appears to have been the centre in this instance, but farther south, on the coast of Wales and in the English Channel, there was a violent gale, which caused much destruction to shipping. For an example of an opposite condition of barometrical pressure, or anti-cyclone, a term used to describe an extensive area of high pressure with slight gradients, the month of September may be referred to, when for twelve successive days, from the 13th to the 25th, with one exception, the barometer stood above 30 in., culminating in 30.58 in. on the 15th. During that time there were ten successive days on which no rain fell, from the 15th to the 25th. A still better example was furnished by the latter part of June and the beginning of July. From the 26th June to the 10th July, a period of fourteen days, the barometer ranged from 29.98 in. to 30.43 in., and during that time the winds were very light, and only one-hundredth of an inch of rain fell. It is not without reason, therefore, that a continuous high state of the barometer is commonly associated with settled weather, for the period mentioned was by far the finest and warmest part of the summer. The theory of meteorologists regarding these cyclones and anti-cyclones is that the atmosphere which envelopes the earth resembles an ocean, which, like the sea, is more or less

constantly in motion, and is characterised by waves of greater or less height. When an anti-cyclone, or period of high pressure, occurs the crest of the wave is passing over us, while in a cyclone we are under the trough of the wave.

Temperature of the Year.—The highest temperature occurred on the 30th June and 2d July, when the maximum reading of the thermometer was 78 degrees; the lowest on the 21st December, when the minimum reading was 8 degrees, and the river Nith for the only time during the season was frozen over. Annual range, 70 degrees; mean temperature of the year, 46·2 degrees; mean at Cargen for last 26 years, 47·9 degrees. The mean temperature of August, October, and November was above the average, that of the other months was below it. During the year there were 112 days on which the minimum reading of the thermometer was at and below 32 degrees—27 in January (157 degrees of frost); 18 in February (91 degrees); 16 in March (75 degrees); 4 in April (4 degrees); 3 in September (2·5 degrees), 3 in October (2·5 degrees); 7 in November (8 degrees); and 27 in December (196 degrees)—in all 536 degrees of frost. It will be observed from this statement that the autumn months were characterized by milder weather than usual, while January, February, and December, with the first half of March, were of a peculiarly wintry character, and marked by a temperature much below the average, though frequent fluctuations, both of pressure and temperature, made the weather as a rule exceedingly changeable. The spring and early summer were also colder than usual, a circumstance which threw the harvest into a late period of the year, when much rain fell, and caused great damage to cereal crops.

Rainfall of the Year.—There was an extremely heavy fall between the 12th and 13th October, when the rain gauge registered 0·91 in. for the 24 hours. We can better imagine how much this represents when we take into account the ascertained fact that the fall of an inch of rain in depth is equivalent to 100 tons of water per acre. But the heaviest fall of the year occurred on the 5th September, on a Sabbath afternoon, when 1·02 in. was recorded in the 24 hours. Unlike the former, which was a steady, continuous fall through the day and night, the greater part of this fell within the space of an hour. The previous day (Saturday) was oppressively warm, with a maximum temperature of 77 degrees, and the atmosphere strongly charged with

electricity. Some rain fell on Sabbath morning, but it was not till three o'clock in the afternoon that the downpour commenced in right earnest. At that hour there was a sharp shower, followed, after a brief cessation, by a tremendous torrent of rain, accompanied by numerous peals of thunder and flashes of lightning, and shortly after by a high wind, the noise of which almost drowned the sound of the thunder, and the sky at the same time grew so dark that it was hardly possible to see to read. The drains being insufficient to carry off the great body of water which fell in so short a space of time, many of the streets and roadways of the town and suburbs, and of the areas and cellars in low-lying parts, were flooded to a considerable depth. The storm appears to have been more severely felt on the shore of the Solway Firth, particularly in the neighbourhood of the Brow Well, than further inland. The following description, given in the *Standard* newspaper at the time, is worthy of being quoted:—"Before the heaviest of the rainfall, a hurricane was observed suddenly to spring up, apparently about Southernness Point, and drive masses of cloud before it in the direction of Silloth. The sight was one of terrific grandeur, so rapidly did the clouds speed along, and so tumultuously did they roll over each other. When near to Silloth, the storm seemed suddenly to veer, and swept across the channel and inland in a north-westerly direction. The roar of the wind was heard a considerable time before its force could be felt, and then the few persons who were out found it impossible to stand against it, and were fain to lay themselves prostrate. The rare phenomenon of a water spout was also witnessed. The water was lashed up into a tapering column, described to us as having been higher than the Midsteeple of Dumfries, and this careered along in a threatening manner, but it gradually subsided without any mischievous result, finally disappearing a little to the north of Ladyland, a farm about two miles from Clarencefield."

The wettest month of the year was September, with a fall of 5.79 in., being 3.5 in. above the average. The driest month was June, when the total fall was only 0.77 in. There were 224 days on which precipitation took place in one form or other, but on 25 of these the fall did not exceed one hundredth of an inch. There were 18 on which snow fell, and 206 rain—total rainfall for the year, 40.63 in.; mean of 26 years at Cargen, as reported by Mr Dudgeon, 44.85 in. The average rainfall for Dumfries, according to a table given in Sir John Herschell's article on

“Meteorology,” in the “*Encyclopædia Britannica*” (eighth edition), published in 1857, is 36·9 in. But either this must be an under-estimate, or within the last thirty years the Dumfries district must have become more rainy than at a previous period, seeing that the mean of 26 years at Cargen is in excess of 36·9 in. by nearly 8 in. It is possible, however, that the rainfall at Cargen, from its proximity to Criffel, is in excess of that of Dumfries. It has been so during the past year by more than $2\frac{1}{2}$ in., that of Cargen being 43·31 in. and that of Dumfries 40·63 in.

If we compare the average rainfall of Dumfries with that of other stations in this country, it appears to be much in excess of many of them; that of Edinburgh, for example, being 24·9 in.; Arbroath, 27·44 in.; Aberdeen, for last five years, 29·6 in. But it is a well-known fact that the western side of the country has a much greater rainfall than the eastern. Ardrossan has an average rainfall of 37·5 in., and where the stations are situated in elevated regions, or in the neighbourhood of mountains, as in the Western Highlands, the average is greatly increased, ranging from 60 to 80 inches on the west coasts of Scotland and Ireland. At Seathwaite, in Cumberland, at a height of 422 feet, it is said to amount to 154 in., which is the greatest recorded in Britain. The cause of this is not difficult to explain. The greatest part of the moisture, which is deposited in the form of rain, is brought by westerly or south-westerly winds from the Atlantic; and where the coast is mountainous the air is forced to ascend into the higher and colder regions of the atmosphere, where the vapour which it contains is condensed by the lower temperature, producing the drenching rains so common on the seaward slopes of our western hills. We are not subject in Dumfries to such excessive rains as these, but still we cannot boast, as the above report shows, of a very dry climate, nor even as far as regards the past year at least, of a very warm one.

II. *Notes on the Bridge of Nith.*

By MR J. CARLYLE AITKEN. (Abridged.)

The date of the Old Bridge of Dumfries is usually given as 1275, and that it has been assumed by some old ecclesiastics that Christian, sister of Devorgilla, was associated with her in the work, but as she died in 1246, and as the Bridge was probably built in her lifetime, it is possible that the structure was earlier

than the date usually given. In the course of the ages prior to this artistic structure, the stone bridge of the 13th century, there evidently must have been some practical link of communication connecting the town and religious communities with their Troqueer lands on the opposite shore of the Nith, and the inhabitants of Galloway generally speaking. We think it probable that some rudely constructed bridge of wood may have preceded this stone structure. This supposition is rendered the more probable, seeing that in 1609 a petition to the Privy Council anent "the brig of Dumfries, which the saidis Lordis knawis is a verrie large brig of mony bowis," the petitioners further allege and explain as to the then threatened hindrance "of the ordinar passage over the wattir of Nith, sein na boat dar ga upon that wattar but in calme and fair wedder in respect it has so swift and violent a course." From the earliest ages we find the Dumfriesians have cherished an amiable predilection in favour of this their "Auld Brig" of Dumfries and of Nith, a predilection the depth of which, in the reign of King James the Sixth, manifests itself in the fervidly amiable language and prayer of their petition anent its threatened ruin, as we may by and bye see in detail. The ancient King's town of Dumfries, as the great seat of the courts of law, of oldest time held within the Castle of Dumfries, with its monastery, mills, commerce, and shipping, must in a very real sense have been the natural central capital town of the shire, as well as of a much wider superficial area of a land in which towns were as few as far between in the undeveloped ages of the history of Dumfries and Galloway. As the shipping of the port of Dumfries on the Nith is in some sort allied with the history of the Bridge of Nith, we here add what may to some extent be considered as one of the foundation vouchers of its descriptive limits and history, as they were understood to have been in the first year of the reign of Henrie and Marie, King and Queen of Scots. We the more willingly do so seeing that the preparatory narrative of the cause itself contains some interesting summary of the constitutional history of the ancient Burghs Royal of Dumfries and Kirkeudbright, which although otherwise not unknown here receives positive and official confirmation. We need hardly say that so far as the Burgh of Kirkeudbright is concerned no older surname can there well have been there than that of the Maclelland of Bombie, which is associated with the narrative of their Burghal Charter, dated Perth, 26th October, 1455, wherein the reigning

Provost or Alderman of "Kirkcudbrith" is named "Willm Macleland de Bomby." We here add the outline of the petition, which is dated 22d March, 1565, and seems to us almost unique of its kind:—

"Henrie and Marie be the grace of God King and Queine of Scottis, to our lovittis William Cunynghame, our Sheriffs in that part conjunctly and severallie, specially constitute, greeting: For-alsmekill as it is humblie meant and shewin to us be our lovittis the provest, baillies, counsall, and communitie of our Burght of Dumfries: That quhair our Burgh is infest and erectit of auld in free Burght Royal, with all Privilegis, Freedoms, and siklike Liberties as ony ither burgh within our realme, as the saide compleinaris infestment thairof mair fully purportis, Be virtew of the quhilk thair predecossoris & thai has been in possessioun of crising, lading, and coquetting of alle Schippis & Boittis resorting and arruing betuix our said Burght & the Burne fute of our Abbay of Dundranane, but interruptioun in alle tymes byegane past memory of man: Nochtheless, Thomas Makccllane of Bombie alleging him to haie in tack & assedatioun all and hail the Custownis of our Burght of Kirkeudbright within all the parts and boundis thairof betuixt the Wattir of Nyth & the Wattir of Cree, as hes beene usit in tymes bigane, and that William Killaw, maister; James Simson, owner; Arrold Davencurtiss, servand to Peter Purot, merchand in Burdeaux, hes laitlie brocht in ane schip callit 'The Grace of God' within the freedom of our saide Burght of Kirkeudbright, browken bulk and sauld the saine to the foirsaidis compleinaris, and will nocht pay the custownis thairof to the said Thomas & quhilk is nocht of verity, has obteneit our uthir Lettres be deliverance of the Lordis of our Counsale, & therewith gart chairge the saidis compleinaris and the saidis maister and ownar to content and pay to him as allegit takkisman foirsaid that foirnamit customes of the guidis customabill being in the said schip, and als chairging alle our liegis & strangeris arryving within the freedom of our said Burght of Kirkeudbright, that nane of thaim sell, dispone, or put away the guidis and merchandise customabill to be brocht be thaim within the said freedom, &c., &c. Quhilkis utheris Lettres are wrangouslie and sinisterlie purchaset without cognitioun in the cause, &c. . . . And the said schip arrivit within the freedom of our Ladie burght of Drumfries, three myles be west the Wattir of Urr, as sal be clearlie proven, &c. Our will is

heirfore, and we charge you that ye lauchfullie summon, wairn, and chairge the said Thomas Makccllane, allegit takkisman foir-said, and the Alderman and Baillies of our said burgh of Kirkcudbright, personallie or at their dwelling place, to compeir, &c. The said otheris Lettres wrongously purchased are hereby suspended, &c. Given under our signet at Edinr., the 22nd of March, and of our reigns the first and twenty-fourth years, 1565.

“ Ex Delib. Dom. Concilii. ”

Our real chartered history of the Bridge begins in the reign of King James the First, and the first quarter of the 15th century. This is, of course, the period when the family of Douglas were already far advanced in their reign of one hundred years over the Lordship of Galloway. King James the First, in 1424, had completed his nineteen years of captivity in England. Between the years 1275 and the chartered year 1425 we learn little or nothing concerning the Bridge in any shape. In the course of the first half of the 15th century there are a charter and a confirmation charter of the Bridge Toll or Custom. The first of these is the still extant charter by the Lady “Margaret, Duchess of Touraine, Countess of Douglas, and Lady of Galloway and Annandale” (as she therein styles and describes herself), wherein she grants to the Friars Minors of Dumfries her own vested rights in the Bridge of Dumfries, as described in the charter, which is dated, “At the Trief, the 16th of January, 1425.” On the back, in an almost contemporary hand, is the following endorsement: “Domine Galwidie de Ponte, 16th January, 1425.” The next document we still have is the confirmatory and renewal charter, dated 4th of January, 1452, whereby “James, Earl of Douglas and of Avondale, Lord of Galloway, etc.” (as he is there styled), confirms to the said Friars Minors the previous charter of the Lady Margaret in Anno 1425, in this instance the source and nature of the toll or custom being more fully described as pertaining “ad pontis de Nyth de Drumfres;” while the relative endorsement of the time is “Carta de Douglas de Custuma Pontis.” The real intrinsic position and relative significance of the noble family of Douglas generally within the realm of Scotland is best understood by reproducing from “The Douglas Book” the following summary and exposition of the learned editor, Dr William Fraser, C.B., wherein it may be observed that even the wide domain and lordship of Galloway formed but a small item in the catalogue of the Douglas family possessions within the realm of

Scotland, as in this rare and valuable work fully set forth. Incidentally treating of the great power and authority of the family of Douglas, Dr Fraser says:—"Thus by rapid strides the family of Douglas rose within one generation from the good Sir James to be owners and rulers of the greater part of the South of Scotland, as well as of considerable estates in the North. They bore undisputed sway over a large portion of the shires of Lanark, Peebles, Selkirk, Roxburgh, parts of Berwickshire, and Dumfriesshire, with the whole of Galloway. To this territory was added for a time the earldom of Mar and lordship of Garioch. When it is further considered that either nominally on behalf of the King or in their own right the lords of Douglas possessed or garrisoned the strong castles of Kildrummy in Mar, Jedburgh in Teviotdale, the Hermitage in Liddesdale, the Thrieve in Galloway, Tantallon in East Lothian, Lochmaben in Annandale, as well as their native fortress of Douglasdale, it will be more easily understood how the members of this one family were able to maintain a more than royal state, and their power became dangerous to the throne itself. Of ancient Galloway under the Lords and Earls of the Douglas family there are many details of much local interest. Notable among such is the chartered history of the Douglas possession of the barony of the Balliols of old time, the barony of Botle, which also appears to have been the first landed possession of the Douglasses in Galloway. In the year 1325 it appears King Robert the Bruce granted a charter of the lands of Botle, *totam terram nostram de Botle, in Galwidia, cum suis pertinenciis, &c.*, to the good Sir James. In the year 1342 Hugh Douglas, the brother of Sir James Douglas, resigned the same lands. Further, in or about the year 1348 A.D. William, Lord of Douglas (afterwards the first Earl), granted to his godfather, William Douglas, the Knight of Liddesdale, the lands of Knokys, Sevenkirks, Kenmore, Logan, and Colennauch, in the barony of Botle in Galloway."—(Reg. Hon. de Morton, ii., 10.) During nearly the whole of the 16th century the records give but few details touching the Bridge. However, you incidentally learn the existence of a fund, then known familiarly as "The Brig Werk," to which all freemen and burgesses had from use and wont been accustomed to subscribe as one of the known penalties of their elevation and future existence as duly constituted freemen. From the great diametrical change which has since that time taken place in the purchasing power of money, to even form an

approximate estimate of the extent of such fund might be very difficult. On the other hand, the following stray reference seems to stand alone in the record, although it serves to remind us of the liabilities to which the Bridge, the Mill, the great grange, or "Barnsbuith," and their surroundings of "the Brigend of Dumfries," were constantly exposed in the nature of things:—

At Drumfries the 28th of May, 1521.

"The Alderman, Baillies, and Community of Drumfries has set to Thom Cunynghame in heritage ane Mylshed with ane Watergang distrinzeand fra the Moit to the Barnsbuith of the Sandbeddis, payand thairfore zeirly 20s. If the Myll-stob does ony skaith to the Sandbeddis, or to the Willies, the said Mill (of the Sandbed) sall be distrenzit (for the damage)."

As we understand this entry, we suppose the place-name of the "Staikfuird" had been descriptive of some ford of stakes or mill-dam barrier of the river Nith in that locality. The Staikfuird Mill, as one of the Mills of the College and Barony of Lincluden, must once have been of no small importance. Of old the eastern foreshore and bank of the river Nith, from the march of the College lands of Nunholm downwards to the Bridge of Nith, seem to have been in general described, in whole or in part, as the ancient ecclesiastical lands of Dumfries: the haughs of the vicinity of the river-bed and as far as the Staikfuird and Greensands being comprehended within the limits of "the Moitlands" and "the Over-Haugh" as descriptive of such pasture grounds. To the haughs there succeeded a general eastern foreshore of sand and gravel levels of river bank, reaching beyond the bridge and mill. This flat region, in virtue of its nature, was collectively known as "The Sandbeds," which were singled out again distinctively as the Upper and Lower Sandbeds; or, later, as the Green and the White Sands. Between the Friervennel and "the Moit," and beyond, riverwards, there seems to have been little else than orchards, fields, and open spaces, with occasional granges, or barns. At or about the northern verge of the Greensandbeds, and by the Staikfuird ford, the "water-gang" of the "Old Sandbed Mill" had its origin in the Nith, flowing onward through the said sandbeds until it supplied the mill and tanneries, regaining the Nith somewhere beyond "the Newtown" quarter of the burgh. Beyond the Brigend the mill-stream, or "water-gang," intersected the great high road to Galloway as it crossed

the Lower or Whitesandbeds, and was then familiarly known as "the Galloway-gait." It seems to us that the Dock Park was formerly designed, generally speaking, as "The Willies." As the safest guide for the natural level of old times we presume the Nith and its course are the true standard, amid so much modern improvement and artificial increase in bulk. In the year 1681 the Bridge of Dumfries the town, in their legal defence, then officially describe as "one of the best and largest Bridges in the Kingdom, and at this time now consists of Nine several Arches." Two years afterwards the ravages of winter had been more than usually serious, the masses of floating ice adhering to the buttresses, collecting until the accumulation, or "gadds of ice," as the record explains, required to be relieved and broken by great stones thrown upon it from above. "The Brig Petition" to King James the Sixth on the part of the town of Dumfries, has, in the Privy Council records and other publications, been in part reproduced. But nowhere have we seen a true literal copy, such as is here presented from a certified and signed duplicate of the original of the day and time of presentation. The petition as a curious sample of an address to his "Sacred Majesty King James the Sixth," in his own rounded and sublimely classic style, as to "the soverane fontane and livelie spring quhairwith the politic bodie of this estait and everie particular member thairof is cherished and nurished," inherently possesses an historical, literary, and antiquarian interest as a work of art. The bridge had, it seems, been its own tomb, resolving to itself in its fall the whole results of the Royal gift, of the temporalities of the Friars Minors, and the whole patrimony of the toune, &c. "The Brig Petition" to King James the Sixth, as copied from the signed and formal duplicate of the original itself, in the holograph of Albert Cunynghame, clerk, as certified therein by himself in his own hand, circa 1620—

"Most gracious and sacred Soverane,—The greate calamitie and wrak which befell to Your Maties. ancient Burgh of Drumfries in the moneth of (1620) by the overthrow of the bridge thairof through the force and violence of Wattir of Nith, being on our behalf regretted unto Your Mie. by the lordis of your hienesse privy counsell. And your Mie. oute of your moste excellente wisdome apprehending that a voluntarie contributione amongis your M.'s good subjectis would prove the most sure and readdie way for preventing of the wrak and overthrow of the said

Burgh, wherewith it was threatnit by the falling of the said bridge. Your Mie. for this effecte was graciouslie pleasit to give directioun that the mater sould be recommendit to the charit. able consideratioun of your Mies. good subjectis to burgh and land, throughout the whole kingdom. Of whose benevolence towardis this so necessar and common a wark your Maie. reposed with great assurance. Lykeas we embracing this your great overtures as a solid ground whereupon we builded our hopes of a timous and liberal supplie, we made some trial thair of amongis the barronis and gentlemen adjacent to our burgh, who in regard of their vicinity with us have their own conduct interest in the mater; but finding their charity to be cold, and their dispositionis most averse from contributionis of this kynde, we left off all prosequeing of that effort, being loth to lay upon you our new and necessarie burdens wherein help nor relieff was to be expected. And so being lefte to our selfis without alle hope of help that way, we resolved to interpryse and begin the wark our selfis, quhairin eftir long stryving and in end overcoming alle difficulties with continuall turmoyle, trouble, and labour both day and night (wherefrom none within the said burgh were exempt neither in their personis nor pursis) we brocht the wark to a gude and happie conclusioun. And in one year we accomplished and performed the samen in a more substantious and statelie maner nor it was befor. And we may truly affirme withoute ostentatione idyle or vain show that it was the greateste warke that wes evir dune in Scotland in sa shorte a spaice be ane handfull of poor personis without the help or assistance of utheris, wherein as we have striven againis our oune weaknesse and againe all appearans or likleyhood of ane guid success to have followed. And in that has gone verrie far beyond the expectioun of all personis, quho mesuring the greatnesse of the wark with our inhabilitie did apprehend that we did stryve againe the streame, and that our power was not answerabil to such a greate and chargeable work. In doing whereof we have exhausted the whole common rent and patrimony of that toune, and has not lefte so much as ane pennie thair of free. And by continuall and dayly contributione most freely and willingly advancit amongis ourselfis oure purses are so emptied and thairby disabled from undertaking anie uther charge either for the weill of the said toune, or commonweill of the kingdome, that we are forced to yield to necessitie and to sink under the heavie burden which we have so

long supported and which in end hes now our maisterit us. So that the estate of that toune is no longer habile to subsist in that rak and rewine, wherein it formerlie stude amongis. But as ane decayit and faylit member will fall off fra the reste of the bodie, unless your Matie. out of your accustomed princelie commisseratione of the distresse of everie particular member of the commonweil, put to your helping hand. The consideratione quhairof hes movit us in most submissive and humble reverence to prostrate ourselfis befor your hienesse (as the soverane fontane and livelie spring quhairwith the politic bodie of this estait and everie particular member thairof is cherished and nourished) thir our wantis and necessitie. Beseeching your Mie. to consider the necessitie whereunto we are driven be this occasione of the Bridge, and accordingly to extend such proportione of your benevolence and favour towards us as your Mie. shall think meit for the redemptioun and relieff of our comunon rentis engagit by us for the performing of the said work. We are sure that in thingis of so many greate and princelie affairs quhairwith your Mie. is overburdened that we should empesche your Hienesse, but the importance of our comforting ourselves without intermission, or wearying to send up our humble and uncessant prayers unto God for your Mties. long and blessed reign. We reste (at the most respectful distance of the very bottom of the big sheet),

“Your Maties. mo. humble and obedt. subjectis,

“JOHN CORSANE, Provost.

“J. DOUGLAS.

“JAMES MACGOUN, bailye.”

Holograph of “Albert Cunnyngname, clerk of Drumfreise, in name of the hail Counsell thairof.”

4th February, 1887.

MR BARBOUR, Vice-President, in the Chair.

Twenty-six Members present.

New Members.—Mr D. W. Rannie of Conheath, and Mr J. Stafford, Mouswald.

Donations.—The Secretary laid on the table eleven parts of the Journal of the Linnean Society from Mr Robinson-Douglas; eleven old coins from Mr T. Loudon; also, an old Bible in two

volumes, with annotations by Theodore Haak, published in London in 1657, as a donation from Mr John Kerr.

Exhibits.—Mr J. Rutherford exhibited a number of microscopic slides, chiefly anatomical. Mr Coupland exhibited four pieces of rock brought to the surface from the depth of 346 feet, during the boring of the artesian well at the Troqueer Mills. The rock is a breccia, and is of the same formation as that exposed at the railway cutting near Goldielea, and was very difficult to pierce.

COMMUNICATIONS.

I. *The Scandinavian Customs and Habits in Scotland.*

By Mr J. GIBSON H. STARKE, V.P.

In this paper the author referred to some of the customs and habits of the old Scandinavian warriors, few of which are now extant. He remarked that the festivities attending our Christmas resemble those of the Scandinavians, when, at Yule-tide, the huge logs of wood were burnt in honour of the gods Odin or Thor. The mode of interment—the ship-shaped barrows discovered in this country resemble those found in Scandinavia. Mr Starke also referred to the hanging of the mistletoe in the dwelling-houses, the sword dance, the haaf fishing, and the drinking bouts, which have their prototypes still in that country.

II. *Cup and Ring Markings near Kirkcudbright.*

By Mr J. M'KIE, R.N.

In this paper Mr M'Kie described the discovery by a member of the Kirkcudbright Naturalists' Society in April, 1886, of a large stone adjacent to the Dunrod Churchyard, with several cup and ring markings on its surface. In September Mr M'Kie visited this stone, and by scraping away the earth from it he found the traces of seventeen different markings, which he now described, and also some other markings on the adjacent rocks.

The readers are referred to a paper on this subject read by Mr Coles at the April meeting, as it also describes these markings and many others discovered after Mr M'Kie's paper was read.

4th March, 1887.

MR BARBOUR, Vice-President, in the Chair.

Forty-five Members present.

New Members.—Mr G. F. Scott-Elliot of Newton, Dumfries ; Mr W. R. McDiarmid, Edinburgh and Colvend ; Miss L. Chrystie, Dumfries ; and Mr R. Barbour, Belmont.

Donations.—The Transactions of the Essex Field Club were laid on the table as a donation from that Society.

Exhibits.—Mr Dods exhibited pieces of a Roman brick from the wall at St. Albans. Mr J. J. Armistead showed some ova of trout, and some recently hatched fish under the microscope.

Relics of the Stuarts.—Mr Watson exhibited, on behalf of Mr James S. Thomson, the following interesting objects, kindly lent by Mr Witham of Kirkconnell for inspection by the members. They are:—(1) A copy of the prayer used by Queen Mary when on the scaffold immediately before her execution. It was—

“O, Domine Deus, speravi in Te ! O, care mi Jesu, nunc libera me ! In dura catena, in misera pœna, desidero Te ! Languendo, gemendo, et genuflectendo, adoro, imploro ut libereres me !”

The English of which is—“O, Lord God, I have hoped in Thee ! O, my dear Jesus, now release me ! In hard chains, in wretched punishment, I yearn for Thee ! Suffering, groaning, and kneeling, I implore Thee to release me !”

This interesting memorial of the unfortunate Queen was given to Mr Maxwell Witham by Rev. Father Edmond Huckles, Prior of the Dominicans, Woodbridge, in 1879. (2) A miniature portrait in oils of Mary’s grandson, Charles I. This is mounted as a lady’s pin, and is neatly executed. The reverse of this gem contains a replica in gold, inlaid on enamel, of the emblems of death—the skull and cross bones—and the initials C.R. These were formerly manufactured into a locket that had been issued by the Royalists to the leading Jacobite families. This relic has been in the Kirkconnell family for more than 150 years. (3) A manuscript volume of letters, meditations, and prayers composed by Charles’ unfortunate son, James II., when in exile at St. Germain. This volume was sent to the Kirkconnell family in 1702, after the death of James, and is a copy of the original. It is entitled “A collection of several of his late Majesty’s papers of devotion, copied exactly out of the original manuscripts left

by his Majesty in his own handwriting;" and their authenticity is certified by the following holograph note :—

"This is a trew copy of the original papers, which are now in my hands, and which, when the King my son and i make no mor use of them, are to be deposited in the Scotts' Colledge of Paris, ther to be preservied with the rest of the King of ever blessed memory his papers, conform to his Majesty's intention.

"MARIA R.

"St. Germain, Jan. 22, 1702."

The following titles of the papers, which are either in English or in French, will give an indication of their character, and furnish some light on this unfortunate monarch's later days not generally known :—

1, Advice to Converts ; 2, Further Advice to Converts ; 3, Motives of Conversion ; 4, Motives for Leading a Christian Life ; 5, Reflections upon the Vanitys of the World and the Punishment of Sin ; 6, Of God's Goodness Towards Us ; 7, Reflections upon the Corruption of this Age ; 8, Insensibility of Christians who are not Touched with the Judgments of God ; 9, More Considerations upon the Corruption of this Age ; 10, A Prayer, made by his Majesty for his own use ; 11, Bad Christians Worse than Heathens and more Punishable ; 12, Of the Edification and Benefit His Majesty Received by Visiting La Trappe ; 13, His Christian Purposes ; 14, Crosses Necessary to Try the Just ; 15, His Distribution of Time ; 16, Necessary Remembrance ; 17, Wishes to Dy and to be with Christ ; 18, Reasons for Distinguishing that all such as have a Firme Resolution of Living as becomes Good Christians, and do their Parts to Perform it, as far as Human Frailty will permit, ought to desire to Dy, tho' Content to Live ; 19, A Further Discourse on the same subject ; 20, Continuation of the same subject ; 21, Several Christian Maxims and Subjects of Meditation ; 22, His Thanksgiving to God for the Particular Benefits Bestowed upon Him ; 23, That all Christians are bound to aim at perfection ; 24, That there is no true quiet in this world, nor happiness to be expected in the next, without performing all the dutys of a Christian, and that all distracting and dangerous diversions should be avoided ; 25, A prayer for the Church (including a prayer for "mercy on the Queen and all my children ; grant they may live as becomes good Christians ; that my son may succeed me on the throne ; that he may be instrumental of thy glory," &c.) ; 26, Advice to a Religious Person ; 27, "Fatherly Advice to N. N.;" 28, To the same ; 29, To the same ; 30, Questions proposed to his Confessor. The other papers, which are in French, are—31, Some sentences concerning death ; 32, The Vanity of the World ; 33, A letter to——, recommending frequent communion ; 34, A letter to——, exhorting him to change his life ; 35, A solemn promise and protestation to God, wherein His Majesty declares that he would rather "dy the most ignominious death than commit a mortal sin ;" and 36, Three short prayers.

(4) A snuff-box, sent by James' son, the Old Pretender, to the Kirkconnell family as a personal keepsake. This relic is of dark

wood, shaped like a small opera-glass case. It has a silver hoop, with the words—"Jao: et Clemen: Dei Gra: Mag: Brit: Fra: et Hib: Rex et Reg. Fidei Defensor. 1726." On the lid is a heart-shaped shield charged with a sphere, the ring of which is dislocated, and over which is the legend "Spes Ultra." This snuff-box was sent to the Kirkconnell family by the Chevalier and his wife Clementina through Sir David Nairn, their Secretary, whose name is imprinted on the bottom.

Mr Watson, in moving the thanks of the Society be awarded to Mr Witham, remarked that the grandfather of the present Mrs Witham, James Maxwell, Esq. of Kirkconnell, was an officer under Prince Charles Edward, and fought with him in all the engagements, and afterwards accompanied him into exile. While at St. Germain's he wrote the narrative of the Rebellion, which was so largely drawn upon by Sir Walter Scott.

COMMUNICATIONS.

I. *Atmospheric and other Influences on the Migration of Fishes.*

By MR J. J. ARMISTEAD.

The following notes will apply chiefly to the *Salmonideæ*, as that family of fishes has come chiefly under my notice. I may, however, first remark with regret that the systematic arrangements adopted for noting the movements of birds by means of stations all over the world have not yet been extended to fishes, and that our information on many points connected with their habits, is therefore still very meagre. It is now almost impossible for a flock of birds to cross the North Sea without being seen leaving the land on the one side and approaching it on the other, and the facts reported to a central committee. But, notwithstanding this, some of our commonest birds have not been traced to their breeding stations. I might take as an example the knot, which is most abundant on the Solway during the winter months. We know that this bird goes away to the Arctic regions, but we know no more. It is much more difficult to follow the movement of fishes, and there is here a wide field open for the observer. The more we work out the facts about the migration of fishes, the more complex very often does the question appear to become. Primarily there were two causes which led to their migration—first, food supply; second, reproduction of species. It has been asserted that salmon do not feed.

But I am prepared to assert that they do feed, and feed as voraciously as any other members of their family. Passing over the early stages of incubation, we arrive at the parr stage in the salmon's life. The parr, by-and-bye, puts on the livery of the smolt, and at that stage passes down to the sea. It loses the peculiar finger-marks with which we are familiar, and the general trout-like appearance, and becomes very silvery. It used to be supposed that this silvery appearance was caused by growth of scales; but that was not so. It is caused by a silvery pigment on the under side of the scales and opercles, which are scaleless. An interesting experiment was tried some years ago. A number of salmon parr were taken from the river—I hope there are no water-bailiffs present—and placed in an aquarium tank. In due course about half of them developed into the smolt stage. The others did not. Sea water was added, the supply of fresh water being previously cut off. What was the consequence? Some people affirm that parr will not live as such in salt water. These not only lived, but very rapidly assumed the smolt stage after the salt water was added. Now we know that parr feed. Those of you who are anglers know that they would take almost any bait. They have been found gorged with shell fish, with the larvæ of aquatic insects, &c. Smolts also feed voraciously. They would even spoil the sport in a river, taking the bait so readily as to become a nuisance. Could it be supposed that the salmon in its early stage, during which it does not make any great growth, but feeds voraciously, after going to the sea take either no food or very little; notwithstanding that the smolt which had left the river perhaps a quarter of a pound in weight returned as a grilse weighing six or seven pounds? It seems unreasonable. It was found among domesticated fish that at certain seasons of the year they feed voraciously, and at other times very little; but at all times more or less food was taken. At Stormontfield some years ago, it was noticed on one occasion that the smolts which were to be let down to the sea were of a very much larger size than they had been in previous years. It was found, on inquiry, that the ponds had become charged with minute shell fish, and the liberal diet they afforded accounted for the extra growth of the smolts. Some smolts returned from the sea as grilse in two or three months; others in fourteen or fifteen months. Those which returned in two or three months had, taking a very low estimate, attained a weight of some three pounds; but those which remained

in the sea for the longer period—say from May of one year to July of the following year—did not seem to attain a very much greater size than those which returned in the shorter period. The same peculiarity was noticed in the case of tame trouts kept in ponds. Some grow much more rapidly than others. It has been found that parr become smolts and go to sea, some of them the first year; the great majority, the second year; and some not till the third year. This too, was exactly the case among domesticated trout. It was found necessary at the end of the year to take the fish out of the pond and sort them. If this were not done, the big ones would eat the little ones, and at the end of two or three years their size would be altogether disproportioned, some weighing only two or three ounces, others as many pounds, I have known cases of domesticated trout reaching 4 lbs. in two years, whereas usually it takes three years for a trout to reach 1 lb., even when domesticated. A smolt let off in May at Stornontfield returned in July, weighing 3 lbs. On the other hand, a smolt which the Duke of Roxburgh let off on 14th May did not return until July of the next year, and it had then attained a weight of only $6\frac{1}{2}$ lbs., having in fourteen months just doubled the weight gained by the other fish in three months. These, and many other observations, proved that fish spending a long time in the sea did not continue to grow at the same rate as in the first few months. There was very little doubt that food supply was the great incentive which drove salmon to the sea. They did feed, and feed voraciously, in our rivers at times. But sometimes they took little food—when spawning, for example; when the temperature was very low, and when on migration. It was quite possible, for these reasons, to get plenty of salmon with nothing in their stomachs; and as their digestion was very rapid, even after a good meal, no trace of it might be found a few hours afterwards. The idea seemed to exist in many minds that the huge bodies of the salmon were developed by a very indefinite something which the fish managed somehow or other to obtain by a process which they called suction; and this, as a recent writer very aptly remarked, pointed to something like microscopic supplies. But there was no doubt the food of the salmon in the sea consisted largely of herrings, young and old, sand eels, crustacea, &c. They followed the young herring shoals closely. In many cases they had been found gorged with young herrings; and I have a report from the Highlands stating that a

few years ago the herrings did not visit a particular part of the coast at the accustomed time, and hardly any salmon were to be got, although they were usually very plentiful in the herring season. In the summer we had a good many young herrings in the Solway. I have taken them by dredging and otherwise. It was a curious fact that the herring, which used to be so abundant as a mature fish in the Solway, should have left it entirely, although immense quantities were found in the sea just outside the Firth, and the young herrings still visited the Firth itself. These were found in large numbers along the shore, where the salmon are most plentifully caught. The return of the salmon to the rivers was an exceedingly important economic question. During the autumn, when they ran up the rivers to spawn, they did not feed, or fed very little, subsisting during that season on the fat which they had laid on while in the sea. The same thing was observed in regard to domesticated fish. As soon as we reached October, those fish which spawn at that season had almost ceased to feed; but the occupants of other ponds, which spawned about January, went on feeding until hard frost set in, and the water became very low in temperature. Fish, being cold-blooded animals, went into a more or less torpid condition during cold weather. Tench buried themselves in the mud at the bottom, and lay there.

Every angler is familiar with the influence which an approaching thunderstorm has in preventing fish from rising. Fish often do not rise when the barometer is falling, whereas when we had a steady rise in the barometer, with the wind from the west, a good run of salmon was often noticed in west coast rivers. But when the barometer reached 29.50 inches the run ceased. It has also been observed that they run better in west coast rivers when the barometer is lower on the west coast than on the east coast. When it was rising and reached 29 inches, the best run occurred; and from 29 to 29.50 seemed to be the most favourable point. Temperature is also an important factor in connection with the migration of fish, I believe, of all kinds. It must generally happen that the temperature of the river differed from that of the sea or the estuary. Many writers have remarked that the low temperature of the sea induced the salmon to leave it and seek the higher temperature of our rivers. This has been particularly remarked about our North Sea and east coast rivers, which are earlier than those on the west coast. Fish culture has taught us

a good deal here. It was found that in cold weather fish were later in spawning than in mild weather; that during a hard frost they spawned very tardily; and when there was a mild rain and rapid thaw, they spawned more freely than under any other circumstances. If it were taken from ice-cold water and placed in a tank in-doors, the inflowing stream of which was gradually warmed, a fish from which it had been found impossible to take ova would then yield its eggs freely. Some time ago, when seeking salmon ova in the Nith, I could find no ripe fish; but I was told by some fishermen that there were plenty to be got in the Cluden, which I found to be the case. I instituted some experiments, in which Mr Rutherford of Jardington and some others kindly helped me. We had thermometers placed in the two streams; and found, as I expected, that the temperature of the Cluden was higher than that of the Nith. It has been said that the temperature of the sea being colder than that of the rivers, the fish left it seeking a higher temperature. I have not noticed this so much myself; but it is the experience of some writers, and is recorded in the Government fishery reports and elsewhere. But this I know, that the temperature of the sea during the late spring months and in summer was often a great deal higher than the temperature of the water in the river, very often varying ten degrees or more; and we found—a thing which had puzzled naturalists—that salmon leave the sea and run up the rivers at all times of the year, more or less. Why should fish run up the rivers during the summer months, when the spawning season was so far distant? Seeing what an effect temperature had upon the spawning of fish, I suggest that its effect on the reproductive organs might compel them to leave the warmer waters of the sea and take refuge in the rivers. Of course these were the best fish—what we call the clean run fish. When the water of the sea was of a low temperature, as in early spring, we did not get such a large run of fish as we did later on. In the month of March, for example, when the east winds are blowing, the fish do not run so well as in April; and they don't run so well in April as in May. When I was at Douglas Hall I noticed this particularly. So much was it the case that the tacksmen did not find it remunerative to put on the net for a month after the opening of the legal fishing season. But later on, when the sea got warmer, they found a good many fish running. If the weather remained cold, and the temperature of the sea at a low point, there was not

such a run of fish. It was generally supposed that a heavy fresh caused a good upward migration. I believe this was in many instances the case, but there were exceptions to the rule. Sometimes a heavy spate occurred without any fish running. I believe I am right in saying that the bulk of the salmon entering our rivers only run on spring tides, and on those tides preceding the highest spring, more than on the two or three tides after the highest spring. And if a strong westerly breeze accompanied the spring tide on our west-coast rivers, more fish came up than when there was no wind at all; and with an easterly breeze fewer would come up. Now, what effect had the wind on the tide? A strong westerly wind would cause the tide in our rivers to rise higher, to flow longer, and to remain high longer; and if the fish ran, as they were supposed to do, on the top of the tide as it were, a westerly wind, causing the tide to flow even half-an-hour longer, would give a chance for far more fish to get up than if it had stopped at the ordinary time. It was supposed generally that salmon only ran with the flood, that if they found the tide ebbing they turned back to the sea and ran up with the next tide. The larger run of fish was therefore accounted for by the longer time they had to run. More fish came up from neap to spring than when the tides are falling off, from spring to neap; and during that time the only tides upon which fish would run to any extent were those just after the highest spring. Should a land spate occur at the same time, a good run of fish may be looked for, especially if it were accompanied by a west or south-west wind. In many instances a land spate was almost necessary now in our rivers to enable the fish to get over the pollutions and the obstacles which they meet with in their ascent. It has been said sometimes that fish could smell the rain, and certainly they often apparently know when it is coming. I believe they will often run up a river anticipating a spate. I have noticed that fish in a pond will sometimes get very restless and run up the race-ways, and in an hour or two down came the rain. It was most important to get reports from streams which were in a state of nature—unpolluted and unmolested as far as possible. Such, for three miles of its course at least, is the stream (the Newabbey Pow) which passes near my hatchery. It is frequented by very few fish, fewer, I think, than in former years. I have made the acquaintance, I believe, of nearly every salmon that passed up that stream for about a month. As a rule, I find that they do

not run by day, but by night. Only during a spate would they run by day. Some nights they did not run at all. On other nights three or four went up, which was a large number for that stream. The early fish were mostly males. It was quite exceptional to get a female very early in the season. Later on they found both sexes coming up. I also found that they almost invariably run on spring tides, and that they did so whether there was a spate or not. A westerly gale during the spring tides was followed, as expected, by a run of fish. I noticed one pair of fish particularly that came up lately. They had evidently been prevented ascending the stream before. They came to a suitable place, where they constructed a redd and deposited the ova. This took about a week. I then took away the female and placed her in a tank, and waited to see what the other fish would do. I thought it probable that he would go up stream and try to find another female. But he dropped back into the next pool further down stream, and remained there two days and two nights; on the third night he dropped down three pools further; then into another pool further down stream; and from there I concluded he had gone down to the sea. Fish having spawned, evidently have a desire to get away again to the sea; and I believe it is often owing to their not being able to get away with sufficient rapidity that they were attacked by the horrible fungus which abounds in our rivers in some seasons. A remarkable fact which I observed was the appearance in the stream of four spent female fish, which I was perfectly satisfied had not been in the stream before. I concluded that they were Nith salmon which had descended that river after spawning, and, for some reason, went up this little bit of a stream for about three miles. Unfortunately, owing to some misunderstanding, and a complaint by the tacksman that the fish were being interfered with, the observations were brought prematurely to a close. It is only, however, when observations of this nature were made on most of our streams, and reports sent in to some central committee, to be investigated and classified, as has already been done in the case of birds—when all those who are personally interested in our fisheries bestir themselves and investigate the facts in connection therewith, or place facilities in the hands of others who can do it for them—that we can expect to unravel the mysteries of nature.

We shall scarcely notice the well-established fact that instinct

leads the salmon to return year after year to its native stream, and which has a striking parallel among birds, as in the case of the swallow, but pass on to other migratory fishes, first noticing the eels. Unlike the salmon, the eels spawn in the sea, if they do spawn at all. At anyrate, they went down to the sea to breed, and they came back again up the rivers; and we find that the elvers, or young eels, come up about the month of May in large shoals. The older eels come up and run on spring tides, never waiting for a spate.

The herring migrate, not to and from the Arctic regions, as was reported by all the older naturalists—worthy men in their time, and who have handed down to us a lot of erroneous information—but simply from deep to shallow water, and remain, I believe, very near our islands all the time. Their migration is very largely dependent upon temperature. To give an idea of the extraordinary numbers of the herring, if we allow one herring for every cubic foot, and assume a shoal to be a square mile in extent and eighteen feet deep, it would contain five hundred millions of the fish. And there were a great many shoals of vastly larger dimensions. Such were their immense quantity, and such their rapid rate of increase, that the whole quantity caught by man did not appreciably affect their numbers, and they would choke up the sea if they were not eaten by other fishes. One of the fishes most destructive to the herring was the cod, which followed the shoals, and has been found very frequently in the Solway now in the winter, at spots where the haddock used formerly to be plentiful, but from which it has disappeared.

II. *The System of Land Tenure in Scotland.*

By Mr J. W. WHITELAW.

In this paper the author remarked that the system of land tenure in Scotland was of feudal origin, but that very little feudalism now remained except in nomenclature, and the theory that the sovereign is the source and fountain of all rights in the land. He traced the history of Feudalism from the earliest times, showing how the various changes were introduced, and described the rites and ceremonies of investiture.

1st April, 1887.

Dr GRIERSON, President, in the Chair. Fifty-three present.

New Members.—Mrs Gibson-Starke of Troqueer Holm and Mr J. B. Waddell, Dumfries.

Exhibits.—Mr James S. Thomson exhibited, on behalf of Mr Maxwell-Witham of Kirkconnell, a miniature portrait in oils, on ivory, of Queen Mary, Consort of William III., in her early life; also, a richly illuminated psalter, written by the Monks of New-abbey about 500 years ago, and which was a gift from them to the Kirkconnell family.

Donations.—The Secretary (Mr J. Wilson) exhibited and presented to the Society the small urn found at Greystone, the subject of his communication. Mr James Dairon, F.G.S., presented a number of graptolites from the Moffat district.

Field Meetings.—The Secretary submitted the following list of places to be visited during the summer, which the Committee had selected, and moved their adoption:—May—Rue Tower, Dunscore Old Churchyard, Isle Tower (Mr Fergusson of Isle having invited the Society), and Friars' Carse. June—Orchardton Old Tower and Orchardton, Mr Robinson-Douglas having invited the Society to spend the day in exploring the hills, &c., on his estate. July—Meet the Scottish Natural History Club (Edinburgh) at Moffat and visit Beld Craig. August—The district of Sanquhar, Mr J. R. Wilson and Dr Davidson having kindly promised to arrange the programme and to conduct the party. September—Dunrod and other places of interest in the neighbourhood of Kirkcudbright, under the guidance of Messrs M'Kie and Coles.

COMMUNICATIONS.

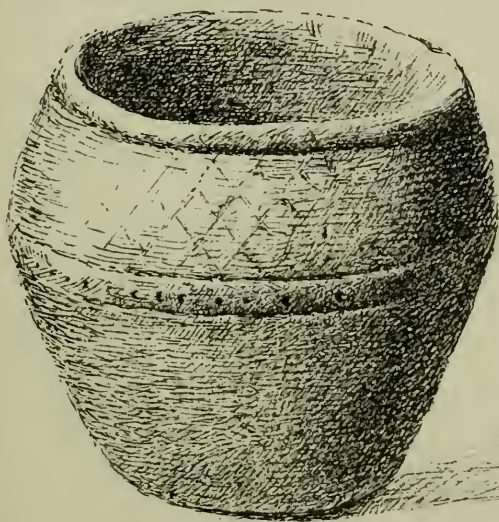
I. *The Small Urn recently found at Greystone, Dumfries.*

By Mr J. WILSON (Secretary).

At a meeting of this Society, held on 5th November, 1880, an anonymous paper, entitled "An Antiquary's Growl," was read, in which the author recorded his protest, and drew the attention of the Society to the fact that the Greystone of Greystone Park had been buried, and that two cabbages valued at two pence were then growing in its place. From that time the subject of raising this old land mark was frequently discussed in committee

meetings, and representations were made to the late proprietor of the field, and to the tenant, but without success. Last year the field in which this stone was situated was purchased by Mr William Dickie, Victoria Terrace, Dumfries, and soon afterwards I waited upon him, and solicited him to favour this Society and the community at large by again raising the stone, and placing it in such a suitable position that the public could have access thereto. Mr Dickie kindly promised to grant this request as soon as he obtained possession of the field; and I have now to report that this stone was dug up on Monday, the 21st March, 1887, and that it is at present lying within eight feet of its original site, it being that distance to the north. Time will not permit me to notice the history of this stone further than to say that it is one of a so-called Druidical Circle which formerly stood on that knoll, and that it was on the northern point of the circle. I may mention, however, that Mr W. G. Gibson informs me that the late Mr John Brodie remembered several stones standing there in a circle, and that he frequently played leap-frog over them when a boy. Mr Brodie also stated that three of these stones were buried in the foundations of Mr Reid's house, a fourth was built into the wall at the Mile-house, and a fifth was lying at the entrance gate of the field. The greystone, that at the Mile-house, and the one at the gate are boulders of Silurian grit, and are dissimilar from the rocks quarried in the district. It was in searching for the greystone that the Urn, the subject of this paper, was found. On Thursday, 17th March, 1887, workmen commenced excavating for the foundations of a house which Mr Dickie purposes building there, and they picked up three old coins—two halfpennies and a farthing—and the bowl of an elfin or old tobacco pipe. These I exhibit and present to the Society. The coins are too much worn, by being so long in the earth, to be deciphered correctly, and the pipe I believe to be of no very distant date. These were found in the top layer of mould, which has been frequently ploughed and manured. Thinking that articles of greater interest might be found, I mentioned it to Mr Dickie, who promised to make arrangements with the contractor for their security and receipt. On Monday the greystone was discovered, and in excavating around it, one of the workmen noticed something which he said "looked like a turnip," and lifted it to the surface on his spade. As Mr Dickie and I had been speaking of urns on the Thursday, the man at once

guessed it to be one, and thinking it might be full of coins emptied out the contents with his knife. Mr Dickie arriving on the scene, got him to replace the contents, which appeared to be nothing but clay, or rather fine sand. In looking about they noticed some pieces of bone, and these they also put into the urn. Mr Dickie gave the urn to me, which I now exhibit and present to this Society. On visiting the place I ascertained that it was lying on its side, and was at the depth of four feet and a half below the surface. It is of red clay, burnt, unglazed, very fine in texture, ornamented with three lines—two at its widest part, with a row of dots between, and one $\frac{1}{4}$ inch from the top. Between the top line and that next below there are fine diagonal cross-lines. The three lines are clearly cut as if made by a sharp instrument. From the accompanying drawing, kindly made by Mr Robert Barbour, its dimensions will be easily seen. It is $2\frac{1}{2}$ inches high, $1\frac{1}{2}$ inches in diameter at the base, and slopes gracefully to its greatest diameter, which is 3 inches at $1\frac{1}{2}$ from the base, then gradually contracts to $2\frac{1}{2}$ inches at the top. There are two small holes pierced through one side about half an inch apart. I have looked carefully for a lid or covering, and also for a larger urn, but up to the present have not discovered either. On Friday evening Mr Barbour and I visited the place, and on digging to the depth of $4\frac{1}{2}$ feet we found numerous pieces of bones, lying on the same level as the urn had been, and within a radius of $1\frac{1}{2}$ feet. These bones we collected, also two pieces of charcoal, and some of the darker coloured sand with a piece of the skull embedded therein. The fragments of bones are not larger than an inch and a half, and are evidently portions of a human skeleton, and I think a full grown male. However, I have these specimens for further examination by experts if desirable. When the greystone was buried, I have ascertained that a hole was dug at the side, and that it was pushed into it, in the direction from the wall or towards the north. The urn was found on the south side of the stone when buried, and we found the fragments of bones on the south side of the place where the stone had lain, so we may conclude that the urn and bones were very close together, and that they were buried in a grave four and a half feet below the present level of the field, or three feet and a half below the top layer of soil, and that the greystone originally marked the site of this interment. From these particulars, I venture to express the opinion that the urn is an



J Akerman, Photo-lith London

Urn found at Goresstone. April 1887.



ancient British Cinerary Urn of the later period, that had been buried by the side of the partly-burnt bones. It was customary, however, at that period to place a small vessel like this inside of, or beside, a larger one, but I have found no trace of the larger vessel as yet. I have sent a drawing of the urn and details to Mr Black, of the Antiquarian Museum, Edinburgh, and I have received his reply since coming to this meeting, in which he says—"The urn is one of a type occasionally found in connection with burials of the Bronze age, and never alone, but always in connection with a larger urn of the Cinerary type." . . . With regard to the purpose of these vessels, Dr Anderson writes—"The purpose of these tiny vessels has given rise to a variety of conjectures. It has been suggested that they may have been censers or incense cups, or lamps, or salt-cellars or vessels for carrying the sacred fire that was to light the funeral pile, or cups for the strong drink required on the occasion of the funeral feast, or vessels destined to contain the ashes of the brain or heart, or for the bones of an infant sacrificed on the death of its mother. All these conjectures are equally probable, inasmuch as they are all equally unsupported by evidence." (Proceedings of Society of Antiquaries, vol. xiii. p. 122.)

Note.—Another stone belonging to the Circle was discovered on making further excavations in the middle of April, 1887, and in close proximity to it were several pieces of bones, similar to those already described. This one is larger than the greystone.

II. *The recent Cup and Ring Mark Discoveries in Kirkcudbrightshire.* (Abridged.)

By Mr F. R. COLES, Vice-President.

About twenty-five years ago, Sir James Y. Simpson, when compiling the materials for his work on British Archaic Sculpturings, described certain marks on rocks and stones in Kirkcudbrightshire. One of these is popularly known as the "Cow Clout Stane," at Kenervie, in the parish of Parton; the other is at High Auchenlarie, Anwoth, some four miles west of Gatehouse-on-Fleet. The Cow Clout marks occur upon the surface of the natural rock; those at Auchenlarie are cut upon a slab. At the same time, there were two localities in Dumfriesshire (Holywood

and Greystone) and one in Wigtownshire (Whirlpool) described by the same writer. Thus, a record of five widely-separated localities marked by pre-historic sculptures was then made for the South of Scotland. During the summer of last year (1886) there was found by Mr William Thompson of Kirkcudbright a highly important addition to our local rock-sculptures in the neighbourhood of what once were the village and Kirk of Dunrod, in the centre of a district teeming with relics of ancient times. I repeat, a most important discovery this, since there were found, not merely oval or irregularly-circular hollows in the rock (such as lead one to doubt the nature of the marks), but distinct cup-shaped cavities surrounded by a clearly-cut ring, and not only by one such ring but by many concentric rings, and besides these, certain grooves or gutters connected with them; all so arranged as evidently subservient to some plan and purpose. Before proceeding to describe some of the designs which characterise our Dunrod and other sculpturings, it will be well to familiarise the eye with their general form by noting the seven types into which Simpson collected these strange figures. (See Plate I.)

Type 1.—Single Cups. These may be arranged in any manner, symmetric or not. Sometimes (as at Balmae) a solitary cup is the only cutting on a rock. They may occur in couples and triads, as at High Banks; in long lines, as at Ratho, where the face of a rock forming part of a “Druidical” circle is perpendicularly bisected by a line of cups; or, as at Old Bewick (Northumberland), where a horizontal line of cups is cut along the sides of a rock; or again, they may be clustered together and scattered over the surface of a rock quite undesignedly.

Type 2.—Cup surrounded by a single ring.

Type 3.—Cup surrounded by a series of concentric rings.

Type 4.—Cup surrounded by a series of concentric but incomplete rings, having a straight radial groove. Prof. Simpson thought this the most common.

Type 5.—Cup surrounded by concentric rings which are extended into lines.

Type 6.—Concentric rings without any central or other cup.

Type 7.—Spirals or volutes—the central point being usually marked by a cup-like excavation. Prof. Simpson says this is perhaps the rarest form in Britain, but is common in Ireland and Brittany.

I hope to make it clear that with the exception of the spiral, we have in one small district in the Stewartry all these types represented, and some new ones. The rock containing the strange marks which arrested the eye of William Thompson is a rather smooth northward-sloping piece of “whinstone” (a form of Greywacke), in one of the large and rich pasture fields known

as the Milton Parks. Across it a dyke was built (see dotted line, Pl. II., Fig. 3), which divides this field and the Dunrod Kirkyard from a like field on the east, which also contains a goodly number of sculptured rocks. In honour of its discoverer, I have named this Thompson's Stone. The turf being worn off by cattle, there is exposed to view a surface of some fifteen square feet, very distinctly carved, as shown in Pl. II., Fig. 3. It contains five plain cups, three cups surrounded each by a single ring, two cups surrounded by concentric rings, and two cups with rings and flexed lines; in addition to which there are two oblong cavities. The diameter of the largest ring is eight inches, and of its central cup two inches, the others in proportion. The depth of the cups is barely half-an-inch, while the rings scarcely reach that. The rock has been much disintegrated, and no doubt once bore more cups and rings. Owing to its exposure, the weather has worn down its surface very considerably.

To the east of this dyke, at some 60 yards away N.E., is a similar rock, sloping N.E., which contains numerous sculptures, but all (with one exception) of the same types as those just described. The exception referred to is a group of five concentric circles with a very broad channel beginning at the third ring—very similar, therefore, to the largest group on the Auchenlarie slab (Pl. II., Fig. 1), and to the larger group on the rock at Clachandolly (Pl. VI.) The surface of this rock at Milton is very closely covered with rings, cups, and grooves, but as the rock has also been severely weathered, it is extremely difficult to say what may be artificial groovings and what natural cracks and narrow fissures, if indeed the one may not be the cause of the other. There are at least 15 cups and 20 rings on this stone, besides oblongs, the largest ring being almost 12 inches in diameter and the smallest about $3\frac{1}{2}$ inches. The oblongs on these Dunrod rocks are all small—not more than $2\frac{1}{2}$ in. by $1\frac{1}{4}$ in. or thereabouts. In this East Milton field there are a great many cups and rings of the same types as those just described. I shall, therefore, note only such as have marked peculiarities. One such is shown in Pl. II., Fig. 2, where we find a large cup, larger than the central one, lying between the two outer rings of the group of four concentric circles—the greatest diameter being 10 inches, the outside cup being 2 inches wide. A groove connects the third of these rings with the ring of a second group about 10 inches distant, and another single cup and ring are carved about four inches to its northerly side.

The next interesting deviation of type is represented on a small piece of rock close to the road and a few yards west of Low Milton Cottage. It is shown on Pl. VII., Fig. 2. The upper portion of this rock having been well under the turf, this cutting of a single cup and ring is more than usually deep and distinct. They have evidently, when fresh cut, been a good inch deep. The serpentine groove which comes out of the ring is also at its upper end very clear, but, as it bends down to the ring below and enters its cup, it becomes almost hypothetical. At six inches to the left of this lower cup is a third cup, also obscure. I do not find any trace of the prolongation of the groove towards this third cup.

Near the farm of Milton, and not far from the remains of a Fort, there are innumerable surfaces of the whinstone exposed—some nearly flat. On the flattest of them all I found the design shown in Pl. VII., Fig. 1. It is remarkable for the perfect precision of its circles, the straightness with which its cups lie in a line, and the curiously short lip of the largest ring. They are carved in almost, if not quite, a due N. and S. line. There is something, not only in these details, but in the size, shape, and appearance of the surface of this rock, not a little suggestive of the lid of a kist-vaen. The following are the dimensions :—

Greatest length of stone	... ..	4 feet 6 inches.
„ width „	... ..	2 „ 6 „
Diameter of largest ring	... ..	5½ „
„ „ cup	... ..	3½ „
„ of smaller ring	... ..	3½ „
„ „ cup	... ..	1½ „

These Milton fields contain then at least 42 cups and 44 rings, distributed over a total of seven groupings or “localities.” I have little doubt that more yet remain to be discovered. Some of the most remarkable of these Petroglyphs were those found by Mr E. A. Hornel and myself on the 23d of February, 1887, in the neighbourhood of Old Galtway, Knockshinnie, and Balmae.

At High Banks, by the kindness of Mr Rigg, we were shown, first of all, a surface of whinstone upon which we could trace an elaborate design composed of central cups and *rings of cups*, or cupped circles. This arrangement of a cup surrounded by a ring of cups, which, to us, seemed a new fact in this study, would appear to be not so rare, for Sir J. Simpson says—“On the Rowtin Lynn Rock (Northumberland) is an example (the only

one I have noticed in England) of a cup surrounded by a circle of cups, instead of a circular line"—seeming to imply by this that the arrangement is at least known on Scottish rocks, or elsewhere. Yet in no one of the numerous plates illustrating his work is there any example given of such an arrangement. The only approach to it is a group of six concentric circles *dotted* out on a monolith in Sweden.

Captain Conder, R.E., a great collector of lapidary sculpturings in the East, to whom I wrote about these cup circles, replied that they were new to him. It would be strange if this type proves to be peculiar to one part of the British Isles alone. The whinstone rock on which this important constellation of cups is carved lies some 200 yards from the centre of the old village of Galtway.* It trends north and south, and much of it having some fifty years ago been blasted and quarried away, several square yards in all probability of sculptured surface have been lost. Beginning at the southern end of the rock, that nearest "The Gatta" (Galtway village), there is a space exposed of five feet by three, and upon this there are no fewer than 200 cups and 3 plain rings distinguishable—as shown by the photo-lithograph on Pl. III. There are ten central cups; seven of these have a ring of cups seven in number, and one an additional plain ring. Of the three remaining centres, the largest has, first, two plain rings, and beyond these two cup rings containing 21 and 42 cups respectively (‡) The next has four circles of cups, beginning with 14; and the third has a small ring of seven cups, and an outer one of fourteen.† The diameter of the largest ring is 15 in., of the next $9\frac{1}{2}$ in., and of the third 6 in. The cups vary from 3 in. to about $\frac{3}{4}$ in. in diameter, and are barely half an inch deep. Many of them are worn down almost beyond detection. Fifteen feet north of this sculpture is a second cutting perhaps even more interesting and peculiar. (Pl. IV.) I have called it a probable attempt at drawing a tree. My friend, Mr Hornel, who discovered this, made a cast of about a square foot of the lowest or westerly portion of the rock, and was at once struck with the resemblance to a tree. At that time he had not observed the connection of the main broad straight groove GG with the curved

* Known to have been inhabited during the Irish Rebellion, 1641.

† Such at least was the first reading of this ring-puzzle which Mr Hornel and I made. Where all is so vague, I think we are as much entitled to a solution of *seven* as to a solution of *three*, which is a favourite interpretation of other ring-sculptures.

portion on the left. Unfortunately the rock is greatly broken, on the southern side especially, and all the higher portion—on the left in the plate—very much obliterated. Of the two upright grooves marked DD I am inclined to be doubtful—the only fact in favour of their artificiality being that the shorter one does not continue beyond the cup. It may, therefore, like the very distinctly-cut groove T, be considered as a stem of our supposed tree. Of all the rest of the design, the main stem T, the ground line GG, and the groups of cups and ovoid hollows on either side of the stem, there can be no doubt on the point of artificiality. They are perfectly clear cut, deep, and unweathered; and each cup as well as the grooves are full of unusually-distinct and decided tool marks. Indeed, so decided are these that they suggest the only doubt in the matter—were *these* cups and grooves not cut by something harder than the flints of our pre-historic forefathers? There are two very short scratches on the lower side of the ground line GG, one of which has suggested the notion that it was once continued and formed the corresponding arm of a cross. I cannot think that either of these marks has anything to do with the design at all; they are much more like marks made by the teeth of a harrow. On the same line of rock surface the following sculptures are found:—A group of concentric rings with central cup, the largest ring being twenty inches in diameter and the cup one inch. The rings are five in number, and are much weather-worn. A little to the north of this is a wonderfully fresh and deep cup two inches in diameter, having four rings round it, all very clear; one of these rings being so much deeper than the space next the cup groove as to make it look like a ridge above the surface of the rock. This is a rather uncommon form. I have records of only two others at all similar; one is on the Kist-cover at Bleaton-Hallett, Blairgowrie, and the other is mentioned by Mr Jolly in his paper on “The cup-marked stones in the neighbourhood of Inverness.” Near this remarkable cup are two plain cups, and numerous small indistinct cups; and at a few feet away fragments of a different arrangement can be traced composed of sets of one large and two small cups, and of ordinary single cups and rings, and also of rings of cups, like those above described, surrounding a central cup.*

* While preparing this I hear to-day (14th September, 1887) of the discovery of yet more and more peculiar petroglyphs on the same piece of rock at High Banks by Mr Hornel and Mr Thompson.

Some two hundred yards to the south-west of this ridge of rocks at High Banks, we stand in the midst of the turf-hidden multitudinous middens and shapeless walls of the once well-to-do village of Galtway (locally called "The Gatta"). On a small projecting and flat piece of coarse-grained sandy whinstone, we find an interesting type of petroglyph (shown in Pl. V., Fig. 2). It contains a cup 1 in. in diameter, round this an incomplete circle 4 in. in diameter, round this a second incomplete circle $6\frac{1}{2}$ in. wide, and lastly, an arc of above the third of a circle, which, if complete, would have a diameter of 11 inches. This is a noticeable sculpture, as there is no doubt, on examining the rock, that these segments were cut and left incomplete. There are other sculptures on the site of "The Gatta," but all of the ordinary cup and ring type.

The next rock-surface visited contains a highly interesting sculpturing, discovered by Mr Hornel. It lies nearly at the summit of a wooded and rocky hill called Knockshinnie, some 300 feet above sea-level, and within a mile of the sea itself. Nearly half-way between it and the Dunrod rock-markings is the site of the old Castle of Drummore. The design of this petroglyph is shown on Pl. V., Fig. 1. It is rather too vague to admit of an elaborate fac-simile being made, but its prominent features are these—Four concentric rings with central cup and a much larger cup between the circumferences of the two outer rings—precisely the arrangement noticed above on one of the Dunrod rocks. It occurs also on the Rhynie stone (mentioned by Mr Jolly in the paper above referred to), with this difference that the ring-line cuts the cup in halves. There is also a simple cup, with a semi-circle above it, at the higher or south-east extremity of this curious design; and the irregularity of the long groove and of the concentric rings, together with the extremely worn and obliterated state of this entire group of markings, lead one to fancy this may have been an early work indeed of this ancient school of design. Below this part of the hill, on rocks in the home-fields of Balmae, north of the house, are isolated examples of plain cups and cups with single rings, one of these cups being of the unusual diameter of 5 inches. Quite close to the out-houses at Balmae, I found a very clear and prominent piece of cutting. (See Pl. V., Fig 3.) The rings are a little irregular, but the cups quite circular, grooves and cups being something under one-third of an inch deep. This is remarkable for having

two cups within the circumference of one ring. The larger ring measures two feet across in one direction and one foot eight inches in the other. The cups are each three inches across, and the grooves respectively three and five inches long.*

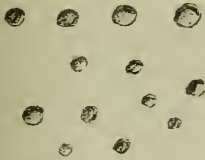
The ground all about these Balmae outhouses is very rocky. Large spaces of rock are exposed, and on almost all of them, there are not only weather-worn ovals and narrower holes, but faint traces of artificial handiwork, besides the distinct design just described and those I am about to refer to. In one large flat rock are two large and deep cavities, measuring about $10\frac{1}{2}$ in. by 8 in. in diameter, and respectively 6 in. and 5 in. deep. They are perfectly spherical at about two inches below the surface; above that line their sharpness of edge loses itself in a lip, and the lip gradually slopes up to the actual surface of the rock. They may have been, originally, grinding basins, and in the course of thousands of years (?) have become smoothed away into their present oval form. Or they may, originally, have been the beds of large pebbles, and thereafter worked upon by the flint or bronze tools of our Archaic sculptors. On the rock nearest these, some twelve or fifteen feet to the east, there are numerous round suspiciously artificial-looking hollows, very shallow, but very regular, which lie in lines along its surface, running north-east and south-west, and evidently a continuation of similar cups to be seen in smaller numbers on another exposed piece of the same rock. The space between the two now exposed rocks is quite turfed over, yet not so deeply as to prevent our striking the rock below with a long-handled spud. We counted at least fifty of these cup-marks; and since my first visit, rings, of the usual type, have been observed. Though there may be a reasonable doubt as to the origin of these cavities, there can be none as to the design and accuracy displayed in the group of petroglyphs presently to come under our notice—the last important typical group of this district.

On the rather steeply sloping surface of a very weathered and glaciated mass of whinstone *in situ*—some 100 yards or so south-west of Balmae—are two sets of concentric rings, one having five rings and an extreme diameter of 24 in., with central cup of $1\frac{1}{2}$ in., being in no way more remarkable than others of the same

* At Little Balmae Mr Hornel has found a very similar sculpturing—two rings within each other, but still more irregular than those described above, and *without cup or groove*. Measurement of outer ring, 18 in. by 17 in. at widest point; of inner ring, 13 in. by 10 in.

PLATE I.
SIMPSON'S SEVEN TYPES.

TYPE 1.



TYPE 2.



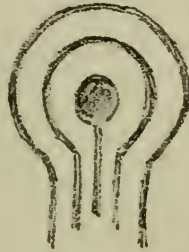
TYPE 3.



TYPE 4.



TYPE 5.



TYPE 6.



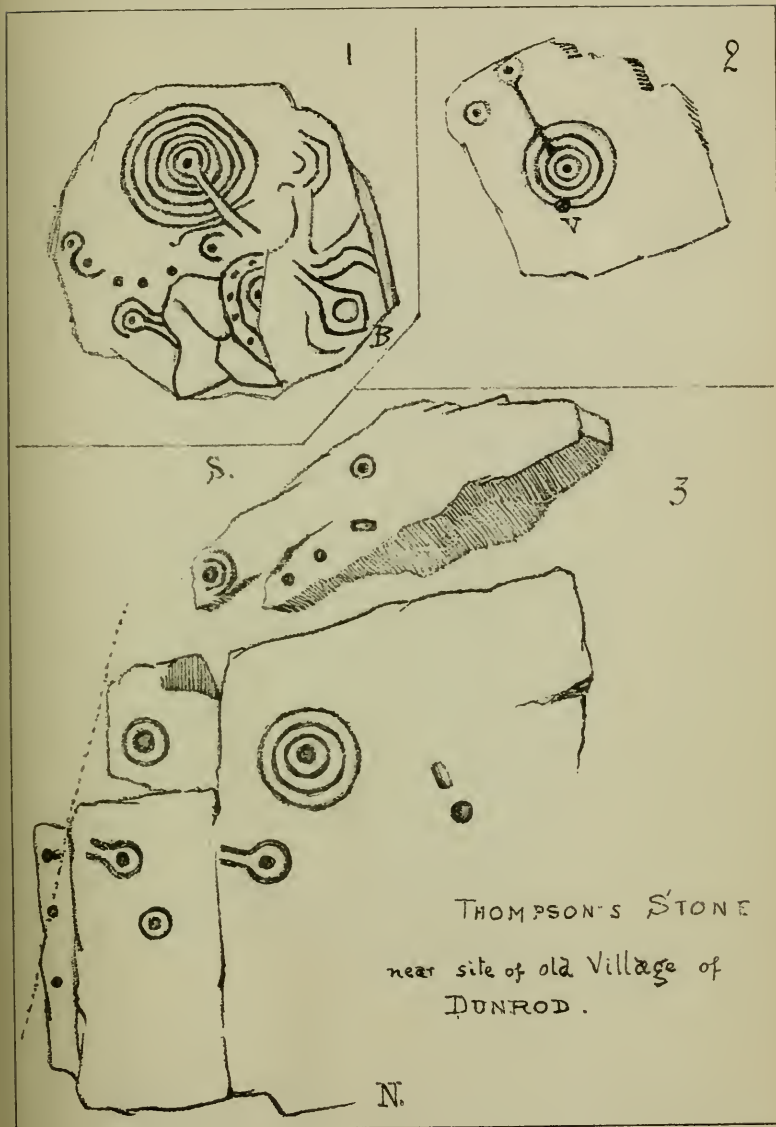
TYPE 7.





PLATE II.

MARKS AT AUCHENLARIE AND DUNROD.



THOMPSON'S STONE
near site of old Village of
DUNROD.



PLATE III
CUP. CIRCLES AT HIGH BANKS.





PLATE IV.

AT HIGH BANKS : TREE-SYMBOL ?

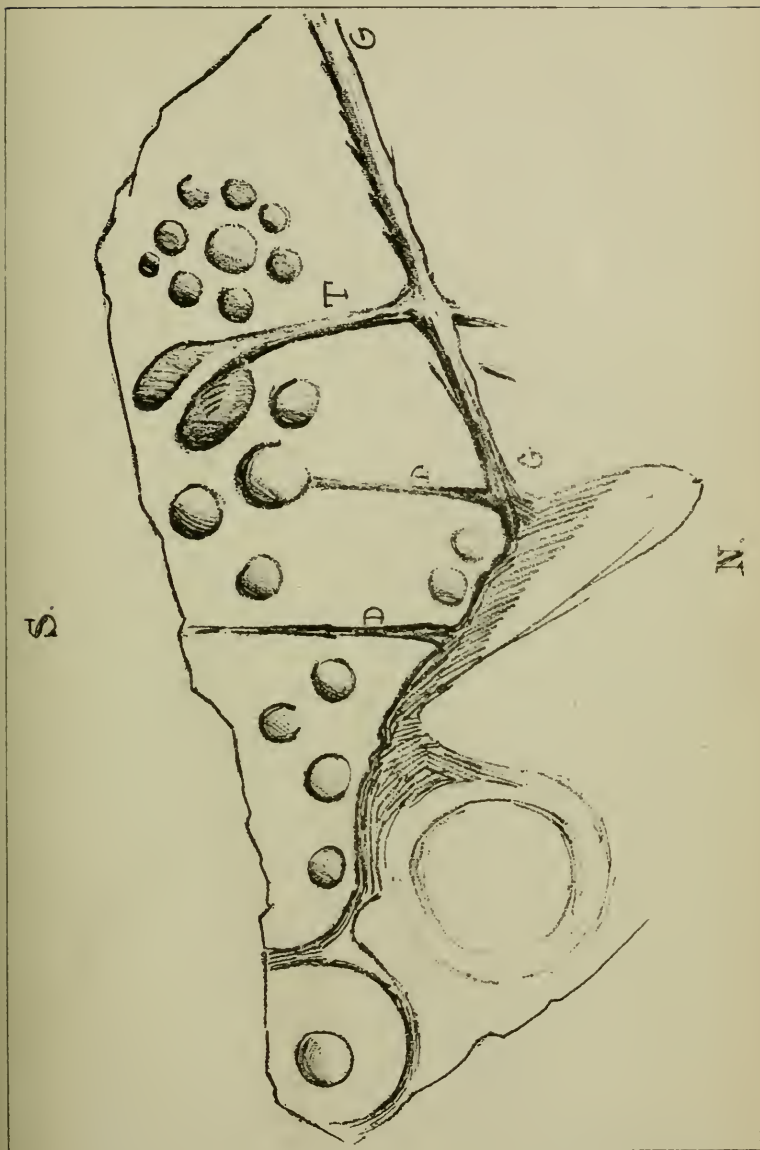




PLATE V
AT KNOCKSHINNIE GALTWAY AND BALMAE

E.

V

W.

2

S.

4

3

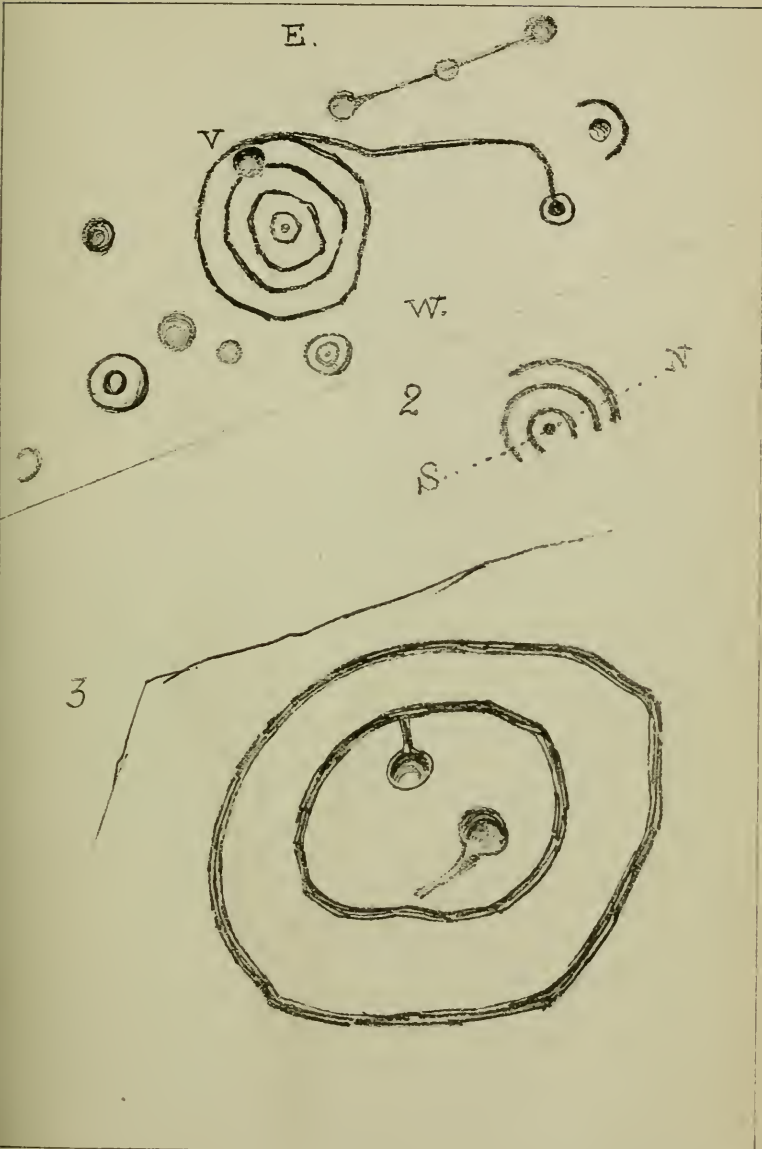




PLATE VI

THE CLACHANDOLLY STONE.
(BORGUE)

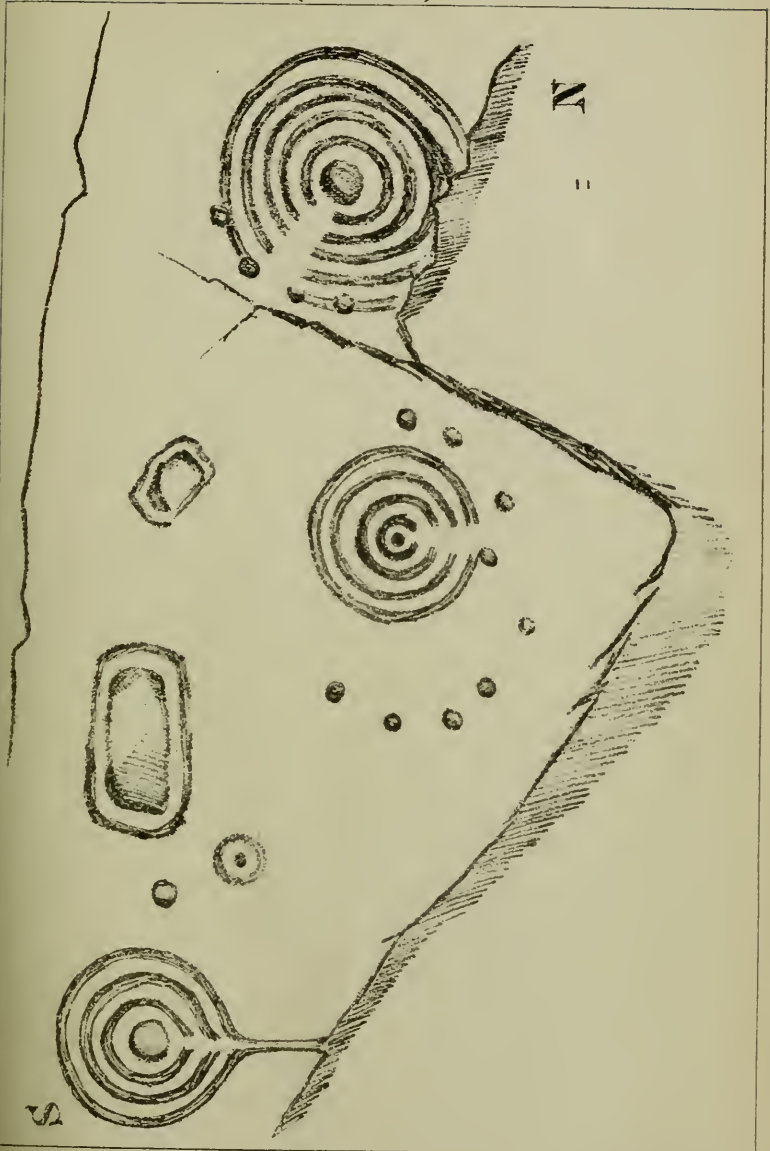
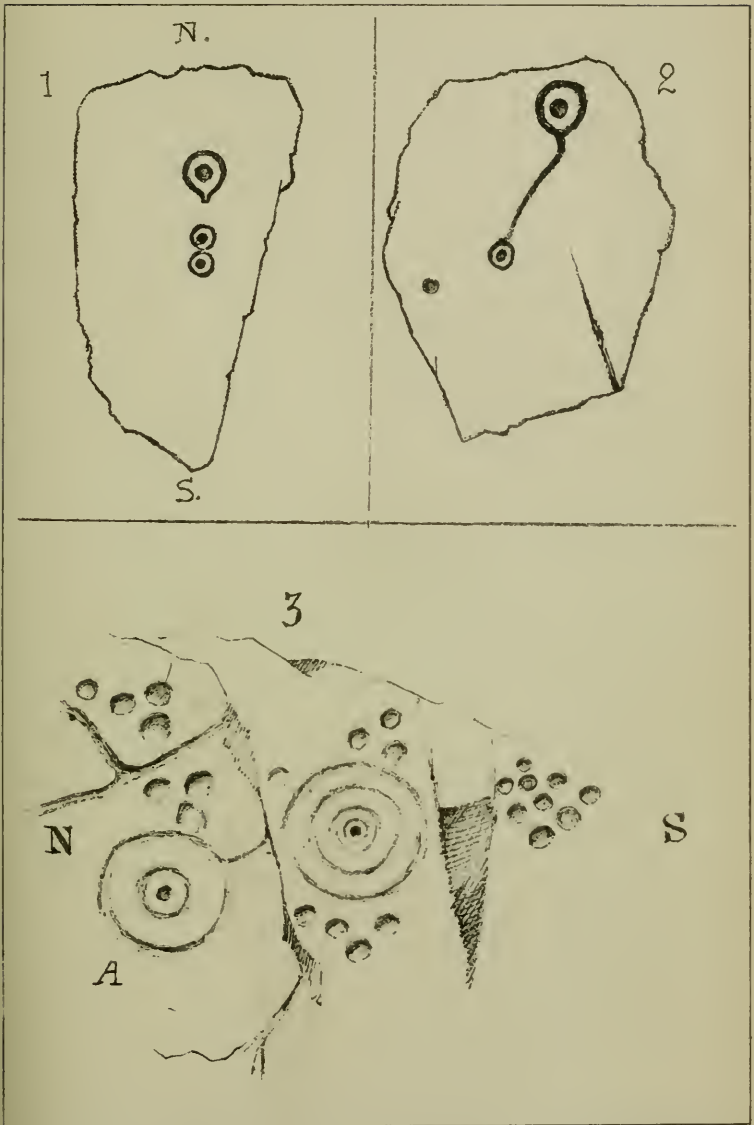




PLATE VII.

AT MILTON AND HIGH BANKS.





type. But its fellow-group of four plain concentric rings, *without central or any other cup*, makes a valuable addition to our Kirkcudbrightshire types. Slightly further to the south-west a similar group of plain concentric rings—five in number—occurs. The diameter of the largest ring in both these groups is 18 inches, while the smallest is 3 inches wide. The sculpturings I have hitherto described are collected within a very small area on the east bank of the Dee: say, from Bombie straight south to the coast where is the site of Raeberry Castle—a distance of rather over four miles, and a breadth of country not more than two—*i.e.*, between the Parish of Rerwick on the east and The Manxman's Lake on the west—at most, an area of not more than eight square miles. Within this area it is also noteworthy that no fewer than twelve ancient camps, forts, castles, or villages can be traced; so that it is manifestly almost impossible that any cup and ring marks should occur more than one mile away from such camps or villages. That they are not found always in proximity to such remains I can prove from personal observation, as *e.g.*, at Borness in Borgue, where, within a few yards of the famous bone-cave, the moats of an old fort are perfectly visible; and in Balmaghie, at Edgarton and Dunnance, where there are two moats within a mile of each other; but neither at or near any of these places is there a sign of cup or ring, and indeed little, if any, of the hard, smooth glaciated whinstone is found there either.

The country on the west of the Dee has not yet yielded so large a crop of good results. There are, however, one or two suggestive sculpturings to be seen on rocks *in situ* here as well as in the Dunrod locality, which seems to have been specially favoured in this matter. On the farm of Brighouse, in a field behind the smithy, at Clachandolly, in Borgue, is a bare piece of rock, long exposed, and showing a design of which I give a representation on Pl. VI. There are two curious points in this petroglyph. First, the size and importance of the oblong cuttings, the larger being seven inches by four inches (taking the outside groove); and then the peculiar effect obtained in the two upper ring-groups, by leaving the stone at its natural level where the rings stop. There is no groove cut down, as in the third or south ring, but a broad clear space simply left intact. There is also apparently a point of minor interest in the arrangement of several cups on the line of the outermost circle in the large group, and what looks like an attempt—and a bad one—to cut a circle of cups round

the small middle group of rings. The diameters of the largest ring in each group, counting from the north end, are 11, $8\frac{1}{2}$, and 8 inches respectively; and the small oblong measures 4 inches by 2. In several spots hard by Brighthouse Bay and Senwick there are reputed cups and rings. One or two which were reported to me proved to be mere weatherings; of others I cannot yet speak by personal examination.

The next important sculpturing is the one I referred to on the first page—the slab at High Auchenlarie, in Anwoth, described by Prof. Simpson. In Pl. II., Fig. 7, is shown what seems a very careful and accurate representation of this stone. It is important in many ways. Simpson says it was dug up by plough many years ago on a piece of waste land, and its exact relations to any other stone, or to the well-known stone circle at High Auchenlarie, were unfortunately at the time not noticed. But he thinks it may have been a *Kist-cover*. It would be very interesting to ascertain this. With the two exceptions I am about to adduce, we have no instance in Galloway, so far as I know, of cup or ring marks being found cut on *anything but rock in situ*. I have examined monoliths, stones, or so-called “Druidical” circles, boulders, &c., and as yet have seen nothing in the form of genuine cups and rings carved on these surfaces, with the following exceptions:—(a) In Tongland, on the lower slopes of Barstobric, there is a much glaciated smooth and very hard block of whinstone (Greywacke), measuring roughly four feet by two, and in thickness about one foot eight. On this there are two large and very distinctly and smoothly cut cups, measuring respectively $5\frac{3}{4}$ in. and 4 in. in diameter, and $3\frac{1}{4}$ in. and 2 in. deep. (b) The other exception is, still on the west side of the Dee, miles away among the moors to the north of Cairnharrow. Here on a wild gloomy spot, 700 feet above sea level, I found near, but in no apparent connection with, a tumulus and two stone circles and kist-vaens, two cups on a rough dark grey sandstone block. One is of the ordinary form; the other is remarkable, *being funnel-shaped*, about $2\frac{1}{2}$ inches deep, and about the same in surface diameter, and $\frac{1}{4}$ of an inch only wide at the bottom. Cup-hollows of exactly this type have also been found in Ohio, and near Penrith.

The Auchenlarie slab—now preserved at Cardoness—displays some fresh points of interest; for it contains not only many and varied typical markings, but has one sculpturing on the lower

portion which is different from any others known amongst our Kirkcudbrightshire petroglyphs. I refer to the one marked B in the plate. The prolongation of the grooves of this cutting has evidently been severed or worn away towards the middle of the stone; there can be little doubt that these two grooves formed part of the design on the upper portion. Indeed, it is quite probable that the general design was carried on beyond B, and down what was, no doubt, the longer surface of the slab. The numerous incomplete circles and semi-circles are also noticeable. Close to the standing stones of the "Druidical" Circle at High Auchenlarie, on the nearest surface of solid rock, I discovered cup and ring sculptures, containing 8 perfect cups varying from $1\frac{1}{4}$ to 2 inches wide, and two groups of rings, the largest being 5 inches wide. There are also straight and curved grooves, the lower and turf-hidden portion seeming to bear proofs of having only begun to be picked out. It may be worth while noting that in the year 1882 the total number of cup or ring marked stones described was in Great Britain 348, of which 128 are sepulchral; while in France, Switzerland, and Scandinavia together there was a total of only 95, of which 21 are sepulchral. The stones are or were most numerous in Northumberland, which had 18 localities—in Yorkshire 8, Cumberland and Isle of Man each with four, Derbyshire 3, and one each in Westmoreland, Lancashire, Stafford, Dorset, and Cornwall. (Pro. Soc. Antiq., Scot., 1881-82.) Counting each separate rock surface as a "locality," the total for the Stewartry of Kirkcudbright will be somewhere between 35 and 40. Hitherto, the Valley of the Nairn has been distinguished by its richness in these ancient sculpturings, but from day to day so many new localities are being discovered and described that it will be hard if we in Kirkcudbright may not soon vie with any other county in adding important facts to the materials already accumulated—which may help us to read this riddle of the rocks—at once so mysterious, so universal, and so human.*

Note.—The cups and rings shown at the foot of Pl. VII. form part—and a very small part—of a most interesting discovery made during this autumn (1887) by Mr Hornel, who has made several excellent casts of this recent "find," which can be seen in the Museum at Kirkcudbright. A surface of solid rock, some

* At some future date I may discuss some of the thousand and one theories advocated in solution of the origin and meaning of the petroglyphs. At present I see no better course than to collect facts and arrange material.

three feet square, sloping off east and west from a central ridge, saddle-like, is covered as closely and intricately as possible with designs of a similar type to those shown on Pl. III., of which, indeed, it forms a portion. Several square feet to the east of this sculptured "saddle" are also very elaborately carved with what seem, at first glance, to be fresh designs, in which grooves straight and partly angular are more conspicuous than rings. There are also many small groupings of cups in threes and fives, some with grooves, others simple. The chief peculiarity in the portion shown in my diagram (Fig. 3, Pl. VII.) lies in the whole inner surface of the ring marked A being hollowed out to a level below the actual level of the surrounding rock. This ring is ten inches wide, and the adjoining circle eleven inches.

III. *The Graptolites of the Moffat District.*

By Mr JAMES DAIRON, F.G.S.

It may be remembered that the specimens which I exhibited before this Society on the last occasion were, with few exceptions, principally the simpler forms belonging to the genera *Monograptus* and *Diplograptus*. To-night, I shall bring forward a few of the more complex kinds, also found in the lower Silurian or upper Llandeilo rocks of the south of Scotland from the locality of Moffat. Although these ancient Zoophytes have not a wide range in the earth's crust, being exclusively confined to the Silurian system, yet, geographically speaking, they are found in various countries of the globe, indeed wherever these rocks exist. I shall again briefly describe their structure, and with the assistance of this model, the accompanying drawings, and specimens which are on the table, those of you who are unfamiliar with the subject will, I trust, be able to follow me as I proceed in the enumeration of the different species.

We shall now notice *Monograptus Sedgwickii*.—There is no Graptolite, it may be stated, that assumes so many different forms and variations of form as this species. Many of these differences, I have no doubt, may arise from their state of preservation, their age, or their sex. There are two or three varieties, which appear to be distinct enough to be entitled to distinct names. The general form of *M. Sedgwickii*, as described by Portlock and figured by M'Coy, consists of a simple Monoprionidian stipe of

considerable length. The breadth of the adult portion of the stipe from the solid axis to the cell mouth is from one to two lines. The axis is capillary, the common canal is broad, sometimes attaining a width of $\frac{1}{20}$ th of an inch. The cellules are long, slender, and pointed, their superior margins slightly convex, and having a general direction at right angles to the axis; their inferior margin more extensively curved, the inner or basal portion being sharply inclined to the axis, while the outer half is nearly horizontal. Each cellule is of a triangular shape, the base resting on the common canal, the cell apertures being at the apex. The cellules are separate, from 20 to 24 in the inch, their general inclination being slightly upwards, nearly at right angles to the axis. Locality—Dobb's Linn, Garpel Glen, &c.

Monograptus Sedgwickii, var. *triangulatus*.—This is a well marked variety of *M. Sedgwickii*, and not a distinct species. The stipe is simple and monoprioidian, and is more or less curved, beginning with a small radical and a slender curved proximal portion, which gradually straightens as it reaches full development. The axis is capillary; the common canal is slender, and very much narrower than in the normal form. The cellules are from 20 to 30 in an inch, nearly at right angles to the axis, and sometimes approaching the appearance of a Rastrite so nearly as to be mistaken for such. Locality—Dobb's Linn and Beld Craig.

Monograptus lobiferus (M'Coy).—In this species the stipe is linear, monoprioidian, often of great length. The full grown individual reaches a breadth of one-tenth to one-twelfth of an inch. The axis is slender. The common canal is rather broad and well marked. Cellules are nearly at right angles with the axis, but having a slight upward inclination. Their upper margin is curved, terminating in obtusely rounded lobes, in which a notch on the under side separates the rounded extremity from the oblique descending margin (M'Coy). The cellules in full grown specimens vary from 16 to 18 in the space of an inch. The base is slender and curved, the common canal having a comparatively greater width. The cell, as is occasionally well shewn, opens at the notch in the under side of the cellule. Locality—Dobb's Linn, Beld Craig, &c.

Climacograptus teretiusculus.—This genus was at first described by Professor M'Coy, and named by him *Diplograptus rectangularis*. It is very abundant, having a wide range passing up through the Skiddaw States, Lower and Upper Llandeilo, Caradoc, and Lower

Llandovery. It will be observed that it shows no row of denticles or hydrothecæ as in *Monograptus sagittarius*, Linn, *M. Nilssoni*, Barr, and many others, but merely elliptical apertures forming the cell's mouths on both sides of a cylindrical frond or tube, which are not opposite to each other, but alternate. Its width when fully developed is about one-eighth of an inch. The solid axis is prolonged both proximally and distally to a considerable length. The external appearance of the frond varies according to the amount of pressure it may have sustained. There are about 30 hydrothecæ to an inch. The cylinder or frond of *Climacograptus teretiusculus* (His.) is made up of two semi-circular compartments, placed back to back with the septum, and the solid axis placed in the centre forming a mutual gable or partition, as it were, between the two colonies of Zooids, having each their own row of cells and common canal, each colony being quite independent of the other. Localities for this species are Dobb's Linn, Hartfell, Beld Craig, &c.

Genera *Didymograptus*.—The polypery is composed of two simple branches springing bilaterally from the radical or initial point. The branches are monopriodon, assuming different angles in different species. The cells, or "hydrothecæ," are generally opposite to the radical or initial point, but in some examples they are found on the same side. The size of the radical or spine varies very much in different species, and in some it is altogether wanting. It is not easily determined to what uses these spines could have been applied, as there does not seem to be any evidence that they had been objects of attachment. If we look at their different positions with the spines inside of the angles or concave, one would think it scarcely possible for them to be used for such a purpose, more especially as some of them are without any radical or initial point whatever. The genus *Didymograptus* was originally founded by McCoy (1851), and takes in those Graptolites which are "bifid," or of a twin character. The vertical range of this genus has its commencement in the Skiddaw and Quebec groups, and attains its maximum in those rocks in which it is represented by numerous and remarkable examples. It likewise occurs in the lower Llandeilo, and is also well represented in the upper Llandeilo rocks, but is scarcely known in the Caradoc period of this country. Several examples are got in the rocks of this age in America, but not one is known in the upper Silurian, and it may safely be said to be characteristic of the upper and lower Silurian periods.

The genus *Didymograptus* of the Moffat district, belongs to the upper Llandeilo black shales. I have brought several specimens forward to-night, which we may examine. It will be found that the cellules are attached to the under or inferior side of the two arms. It will also be seen that the spines are both on the upper and lower, and some cells are without any whatever. It will also be observed that those belonging to the Arenig, or of the Skiddaw and Quebec groups, have their cells on the uppermost side of the stipe, which is the reverse of the Moffat specimens. Locality—Dobb's Linn, Hartfell, &c.

The genus *Retiolites* was originally founded by Barrande, who described one species *Ret. Geinitzianus*, which he obtained from the upper Silurian rocks of Central Bohemia, and figured in his valuable memoir upon the Graptolites of that country, published in 1850. This genus is one of the most interesting of those belonging to the Graptolitic group, but unfortunately our knowledge of its structure is limited, and must, I think, remain so, until a more extensive collection of specimens, in a more perfect condition than hitherto attainable, has been formed and carefully studied. In its general outward appearance the genus *Retiolites* resembles those of *Diplograptus* and *Climacograptus* in having a central stipe or solid axis, to which is attached a double row of cells, giving it a rather leaf-like appearance, but widely differing from those forms in its internal structure. It may be mentioned that in the year 1873 I exhibited a specimen with remarks before the Geological Society of Glasgow, which I named *Retiolites branchiatus*, and which was a beautiful example of the genus, from the lower Graptolitic shales of Dobb's Linn, near Moffat. On another occasion afterwards, in the same place, I was fortunate enough in discovering a new species of *Retiolites*, differing entirely from anything I had previously got at Dobb's Linn. It was found in the upper shales, showing that the genus had lived through the whole range of strata as represented in the Moffat beds. This new species I showed to Professor Lapworth on one of his visits to Glasgow, which he afterwards named *Retiolites Daironi*, and it is figured in Transactions of N. H. Society of Belfast, and this is an enlarged drawing of the same. You will easily perceive how widely it differs in its internal structure from some of the other species. The length of the fronds seem to vary from 3 inches to 4 inches; while their greatest breadth near the centre is $\frac{1}{4}$ of an inch. They have a long, slender stipe in the

centre, continuing beyond the distal extremity. To this stipe are attached, at an angle of 30 degrees, the cellules, which are beautifully ornamented with a kind of lace or network placed around them from the outer margin to about half way on each side of the solid axis; the other two halves on the two sides of the stipe being filled in with a kind of hairy, irregular network. The cells at the outer edge are of a finely rounded or convex shape, numbering about 26 to an inch, and are alternate on opposite sides of the frond, while they gradually diminish from three-quarters of its length to a lancet-shaped point. I think there can be no doubt that there was a chitinous covering over the fine hairy netting for protection that has been worn away. Locality—Hartfell and Dobb's Linn.

Genus *Dicranograptus* (Hall), species *ramosus*.—The polypery towards the proximal point has a double row of cells, but divides or bifurcates at a certain length up into two monopronidian branches on the outside only, or the polypery keeps the same line as commenced at the proximal points, and has two small lateral spines at each side of a minute radical. The structure of *Dicranograptus ramosus* (Hall) resembles the form of *Diplograptus* for so far up, but the *hydrothecæ* appear to have the same form and structure as *Climacograptus*. The branching off of the two arms at a certain distance up make it easily distinguishable from the other allied forms—*Diplograptus* and *Climacograptus*. The genus *Dicranograptus*, as far as known, is entirely confined to the upper Llandeilo rocks of Britain at present, but it is found in the Cardaoc rocks in North America. Locality—Hartfell and Dobb's Linn.

Genus *Pleurograptus* (Prov.)—This large and rather remarkable Graptolite which we now take up is one of the branching forms, and is, perhaps, one of the most curious of any of our British forms, and seems to have some small resemblance to the *Pleurograptus*, as figured by Mr Carruthers, or nearly related thereto. Mr Carruthers had first given it the name of *Cladograptis linearis*. The Generic name is one that was proposed by Genitz, but Mr Carruthers, not seeing it to be appropriate, then changed it to *Dendrograptus linearis*. It is now recognised as *Pleurograptus linearis*. The frond is composed of two long serrated branches springing from a radical or initial point, and gives off branches at certain distances and mostly at right angles to the main stems. I have specimens with a third re-branching process given off,

while Mr Carruthers' specimen exhibits two only. This genus seems to throw out its branches much in the same manner as its primary branches like the small genus *Cænograptus gracilis* (Hall), with this difference that *Cænograptus* does not send out any secondary branches. Locality—Hartfell and Dobb's Linn.

IV. *A Sketch of Early English Costume.*

By Mr J. G. M'L. ARNOTT.

In this paper the author gave an interesting account of the various costumes worn by the ladies and gentlemen of fashion from the Anglo-Saxon period to the end of the 17th century. He illustrated his remarks by a series of large crayon sketches drawn by himself, depicting the modes of dressing during the different periods.



FIELD MEETINGS, 1887.

RUE TOWER, DUNSCORE OLD CHURCHYARD, ISLE,
AND FRIARS' CARSE.—*7th May, 1887.*

The first Field Meeting of the session was held on the above date, when a party numbering thirty assembled at the Fountain at noon, and proceeded thence in waggonettes to Rue or Fourmerkland Tower, passing on their way the Holywood Druidical Circle. Arriving at the tower, they were disappointed in not obtaining admission, as the tenant, forgetting the arrangements, had gone from home and taken the key with him. The tower, which is yet used as a dwelling-house, is not very large, and is a square structure, with small turrets on the front and rear. It was erected by the Maxwell family in the close of the sixteenth century, and over the principal doorway is the family crest, with the initials R. M. and I. G. at each side, and the date 1590 underneath. Some time was occupied by the members in sketching the building or botanising in the adjoining fields and wood, permission having been granted by the proprietor, Mr Maxwell of the Grove.

The next item on the programme was Dunscore Old Churchyard, and on arriving there the party were joined by the President (Dr Grierson), Mr Fergusson of Isle, and Mr Wellwood Maxwell of Kirkennan. The chief object of interest here was the tomb of Grierson of Lag, but, as what was once a monument in stone to his memory had suffered from the weather, and from the hands of those who held this notorious opponent of the Covenanters in little esteem, the tombstone was not easily discovered. At last Dr Grierson pointed out a large slab, half-covered with moss and debris, lying under a sycamore tree, with the traces of an inscription thereon, but now utterly illegible. Near this is the grave of his son, James Grierson, a flat stone, on which his name is engraved, marking the spot. A short time was spent in deciphering inscriptions on other stones. One of the oldest and in good preservation was in the vault of the Isle family. With a little trouble the inscription "Here lys intombit ain honest and uirtus man, Alexander Fergusson of Iyl, 1608," and in the centre of the stone a lion rampant, could be distinctly traced.

From the churchyard the party proceeded to Isle Tower, where they were cordially welcomed by Mr and Mrs Fergusson. This tower is similar in design and appearance to Rue Tower, and was built about the same time, for over the principal doorway is the date 1587. Under Mr Fergusson's guidance the party entered the structure, which is still used as a dwelling-house, and minutely examined the various secret closets in the walls where valuables might be hidden in time of siege, the thickness of the walls, and the oaken floors. The principal entrance is guarded by a strong iron gate constructed of heavy upright and cross-bars dovetailed into each other. Inside of this was another wooden or comfort gate, generally found in buildings of this period. Before leaving the tower, Mr Fergusson exhibited a number of interesting family documents. One of these was the marriage contract drawn up on the 29th May, 1793, between Alexander Fergusson of Iyl and Agnes Lowrie, daughter of Sir Robert Lowrie of Maxwelton, and sister of the "Annie Laurie" immortalised by Burns. Mr Fergusson also exhibited a number of burgess tickets presented to an Alexander Fergusson of later date, who had been elected a member of Parliament for Dumfriesshire, and gained much popularity for the opposition he displayed towards the union of the English and Scotch Parliaments. For this he was publicly thanked by the citizens of Dumfries, and made a burgess of Edinburgh, Glasgow, Perth, Tain, and Lochmaben. Some of the burgess tickets, and especially that of Glasgow, were beautifully illuminated by hand, and the latter bore the date 1770. Numerous title-deeds bearing the seal of the Earl Melross were also inspected.

On leaving the tower the party adjourned to the dining-room, where they were hospitably entertained by Mrs Fergusson. Here a short business meeting was held—Dr Grierson presiding—when Mr Fergusson of Isle and Mr Thomas M'Gowan, solicitor, Dumfries, were elected Ordinary Members; and, on the motion of the President, the thanks of the Society were awarded to Mr and Mrs Fergusson for granting them permission to see this interesting building, and for their cordial and hospitable reception.

Having taken leave of their host and hostess, the party walked along the Nith to Ellisland, where a short stay was made to inspect Burns' old farm-house. On one of the windows, written by the poet with his diamond, may still be seen his favourite

line, "An honest man is the noblest work of God;" and underneath this, on the same pane, is the name Jean Lorimer, also written by him. From Ellisland the walk was continued to Friars' Carse, and on arriving at the Hermitage there, they were met by Mr Nelson's keeper, who conducted them to see a number of sculptured stones and old stone crosses which a former proprietor had collected. A megalithic circle in a wood about a mile from the mansion-house was next visited. This consists of about fifty stones, varying from three to five feet in height, arranged around a larger one in the centre. All the stones appear to be quarried and of a recent date. The lacustrine dwelling in the loch was next visited, a footway having been made to it with branches of trees and brushwood. The outline may still be discerned from the number of upright oaken beams protruding through the mud and above the water.

Owing to the lateness of the season, very few botanical specimens were collected, *Cardamine amara* and the butter-bur, *Petasites vulgaris*, along the banks of the Nith, being the only rarities.

ORCHARDTON TOWER AND ORCHARDTON.—4th June, 1887.

The second Field Meeting of the session was held on Saturday, 4th June, when, on the invitation of Mr Robinson-Douglas, Orchardton Old Tower and the district around Orchardton mansion-house were visited. Owing to the heavy rains in the early morning, and to the constant downpour at the hour of starting (nine o'clock), only fourteen members assembled at the Dumfries Station, and proceeded to Dalbeattie. On their arrival at Dalbeattie, fortune seemed to smile upon the "earnest few," for there was a break in the clouds, and by the time the party had taken their seats in the waggonette which was in waiting, the rain had ceased. From Dalbeattie to Orchardton the drive was most enjoyable, the beauty of the scenery being enhanced by the refreshing rain; and, as glimpses of the sun were occasionally obtained, the party congratulated themselves on the prospect of a pleasant day. The first halt was made at Orchardton Old Tower, where an hour was spent in sketching the ruin or botanising in the district. As the door of the building was opened for the party, the majority ascended to the top by the spiral staircase, where a good view of the surrounding district

was obtained. In one of the chimneys, and about 7 feet from the top, six pale blue eggs in a starling's nest were seen.

From the Tower the drive was continued to the mansion-house, while the golden yellow of the broom and the furze, which was here very abundant, intermingled with the fragrant white of the hawthorn, added a new charm to the scenery. In driving up the avenue to the house the party were joined by Mr Maxwell, the factor on the estate, and on arrival they were received by Mr Robinson-Douglas and by Captain Ramsay—the latter gentleman only recently invalided home from Burmah. Having arranged one o'clock as the hour for luncheon, under the guidance of Mr Robinson-Douglas and the other gentlemen, the party inspected the grounds, conservatories, and flower gardens, where some very beautiful rhododendrons and azelias were yet in bloom. The holly trees were greatly admired for their size, and also for the abundance of blossom with which they were this year clothed, the older botanists of the party never remembering such a show of flower as was then observed.

At the appointed hour they returned to the mansion-house, when Mr Robinson-Douglas exhibited his collections of birds and beetles. The former contained a good many of the rarer birds of this country, and some from the South of Europe and Africa. The entomological collection was very extensive, and gave great pleasure to Mr Lennon and the other members interested in this pursuit.

The party having adjourned to the dining-room, a substantial luncheon was partaken of; and before rising from the table, the usual short business meeting was held, Mr Robinson-Douglas presiding. Dr Mackie and Mrs Mackie, Thornhill, and Mr William Walls, Dumfries, were elected new members. Mr Shaw, of Tynron, moved the thanks of the Society to the sub-committee who had prepared and published the Transactions for Sessions 1883-86, for the trouble they had taken, and for the creditable manner in which they had performed that duty. This was seconded by Mr Bruce, and unanimously agreed to. On the motion of Mr Laing, the Society's thanks were awarded to Mr Robinson-Douglas for inviting the Society to this neighbourhood, and for his kindness in conducting and entertaining the party.

Retiring from the dining-room, the party proceeded to their field of work for the day—the marshy ground, woods, and shores of the bay; for it was thought advisable not to ascend the

adjacent hills, owing to the mist settling down on the tops and obscuring the view. Having arranged to re-assemble at 4.30 at the house, the members scattered, each on his different pursuit; and when they re-assembled the botanists seemed pleased with their finds, but it was not a favourable day for the entomologists.

The following plants were found:—*Ranunculus hederaceus*, *R. Flammula*, *R. Drouetii*, *Chelidonium majus*, *Cardamine sylvatica*, *Cochlearia officinalis*, *Draba verna*, *Viola palustris* (yet in flower), *Polygala vulgaris*, *Hypericum pulchrum*, and *H. tetrapterum* (not yet in flower), *Ornithopus perpusillus*, *Vicia hirsuta*, *V. angustifolia*, *Orobus tuberosus*. One or two shrubs of the Bullace—*Prunus insititia* (rare)—were noticed, and some fine trees of the horn-beam—*Carpinus Betulus*; *Sedum anglicum*, *Hydrocotyle vulgaris*, *Cicuta virosa*, *Carum verticillatum*, *Conium maculatum*, *Chlora perfoliata*, *Menyanthes trifoliata* (abundant), *Scrophularia nodosa*, *Linaria Cymbalaria*, *Myosotis palustris*, *M. Collina*, *M. versicolor*, *Glaux maritima*, *Statice limonium* (rare), *Luzula pilosa*, *L. Sylvatica*, *Blysmus rufus*, *Carex dioica*, *C. vulgaris*, *C. glauca*, *C. pallescens*, *C. panicea*, *C. ampullacea*, *C. arenaria*, and the Star of Bethlehem—*Ornithogalum umbellatum*. The scaly fern (*Ceterach officinarum*) is yet firmly established on Orchardton Old Tower, and several plants of the hart's tongue were observed growing between the stones, which is rather an unusual situation. Neither of these ferns were interfered with by the party, and we trust visitors to this old tower will in future also respect them, as they are now very rarely met with in the South of Scotland. The variety *Borreri* of *Nephrodium Filix-mas* was met with in abundance, and the Moonwort (*Botrychium Lunaria*) was observed in all the old pasture fields.

MOFFAT AND BELD CRAIG.—2nd July, 1887.

The Third Meeting of the Session was held as a joint excursion with the Scottish Natural History Club (Edinburgh) in the neighbourhood of Moffat. Owing to the inconvenient train service, the two Societies had little time together on this occasion. Some of the Dumfries members arrived in Moffat by the morning train, and were met there by Mr Dairon, and Mr Johnstone the secretary of the Moffat Naturalists' Club. As the Edinburgh Society was not timed to arrive in Moffat until one o'clock, this

party visited the Wells, and returned to the Railway Station by the Gallow Hill to again welcome the visitors to the district. The majority of the local Society arrived in Moffat at two p.m., and immediately afterwards the whole party proceeded in waggonettes to the Beld Craig Glen. Alighting at the foot of the Glen, the party wended their way along the water's edge and the precipitous sides until the "Beld Craig," an immense mass of rock nearly 100 feet high at the top of the Glen, was reached.

Here the usual business meeting was held, when Mr Barbour, vice-president, presided, and welcomed the Edinburgh Society again to this district. He regretted that the train arrangements were so awkward as to permit them spending much time together, but trusted that on a future occasion they would be more fortunate. Mr Craig-Christie, F.L.S., hon. secretary of the Visitors, intimated an apology from their President, Rev. T. B. Morris, and expressed the pleasure which his Society had in visiting Lochmaben last year, and also on the present occasion. On the motion of Mr J. Wilson (hon. secy.), the thanks of the two societies were awarded to Messrs Johnstone and Dairon for furnishing the details of the excursion and kindly guiding the party.

From the Beld Craig the party returned a short distance down the Glen until the "Weeping Rock" was reached, over which a small rill comes trickling down. In winter, or after a spate, this is a magnificent sight, as the water falling from such a height is dashed into spray by the rocks below. A short distance below this rock the majority of the party scrambled up the precipitous side to the field at the top, where some time was spent in botanising. From this they continued their explorations over two adjacent hills and through a valley, until the bridge over the Moffat Water was reached, where they found the carriages in waiting, and returned to Dumfries by the train arriving there shortly before nine.

Mr Craig-Christie discovered *Rubus Leesii* during the afternoon; and as he subsequently had his "find" confirmed by Professor Babington, this is the first recorded appearance of this plant in Scotland. Some of the other plants found in addition to the ordinary summer ones were—*Sanicula Europæa*, *Circa lutetiana*, *Crepis paludosa*, *Briza media*, *Cystopteris fragilis*, *Asplenium Adiantum-nigrum*, *A. viride*, *A. Trichomanes*, and *Aspidium aculeatum*.

SANQUHAR DISTRICT.—6th August, 1887.

The Fourth Field Meeting of the Session was held in the neighbourhood of Sanquhar, when a full programme was gone through. A party numbering fifteen left Dumfries station by the 11.55 a.m. train, and on reaching Thornhill they were joined by Dr Grierson, president, and other members from that district. On arriving at Sanquhar they were met by Mr J. R. Wilson and Dr Davidson, who had kindly consented to conduct the party during the day. Under Mr Wilson's guidance they first inspected his extensive collection of celts, bronzes, arrow-heads, and other archaeological specimens, chiefly found in the neighbourhood. The next item on the programme was Sanquhar old Castle, which is situated on some rising ground on the south side of the burgh. This important stronghold is now a ruin, with only portions of the outer walls standing amid the heaps of *debris*, the larger and the cut stones having been taken away for building purposes. Mr Wilson gave a brief sketch of its history, and exhibited a copy of the plan of the Castle, drawn by Mr Anderson of Edinburgh, 1876, for the Marquis of Bute. He said the Castle was at one time occupied by the family of Edgar, and afterwards it fell into the possession of the Crichtons of Sanquhar. It was subsequently sold to the Douglasses, who occupied it before the present Drumlanrig Castle was built. Mr Wilson further remarked that when Mr Anderson examined the ruin, that gentleman was of opinion it was originally a Scottish "keep," and had been added to at later periods. There was a fish pond near to, and connected with the Castle, but there is doubt as to whether the building was surrounded by a fort or not.

From the Castle the party walked along a bye-path to the remains of the Old Bridge of Sanquhar, which was one of the finest in its day in the county, but now only some portions of the buttresses remain. It is first mentioned with the Burgh of Sanquhar in a Royal Charter granted by James VI. in 1578, but there is great probability that it existed at an earlier date. The battle of Langside was fought in 1568, and Queen Mary, when fleeing into Galloway, is supposed to have crossed the Nith by this bridge. The bridge is subsequently mentioned in the time of James II., and in the reign of Charles II. the Burgh of Sanquhar was granted, by Act of Parliament, the power of restoring it and

levying dues. The following is a copy of the Act, read by our guide, and is of antiquarian interest:—

“ A. D., 1661. Act in favours of the Burgh of Sanquhar. Our Sovereign Lord and Estates of Parliament, takeing to their consideration a supplication presented to them by Johne Williamson, Commissioner for the Burgh of Sanquhar, Shewing that the said Burgh of Sanquhar, being situat and builded upon the water of Nyth, ane verie great considerable river, which in the Winter tyme is nowayes pasable at the beist dureing the time of any raine or storme. The bridge which was thereupon being now totallie down and ruined, which is very prejudiciall not only to the said Burgh, bot also to the hail Cuntrie neir the saine, and all others who have occasion to passe that way, who sumtyme will be forced to stay three or four dayes ere they can passe over the said water. And the said burgh, thro the calamities of the tyme and great sufferings they have had, are now redacted to such povertie as they are nowayes able to build up the said bridge, which so much concernes the weill of the said burgh and the publick good of that cuntrie. And, therefor, craveing ane recommendation to the severall presbetries within this Kingdome upon this side of the fforth for help and supplie for building up the said bridge, which so much concernes the weill of the said burgh and all that cuntrie. And, also seeing such a contribution will be unconsiderable for as great a work, therefor also craveing ane certaine small custome to be payed at the said bridge for such years and aff such persones and goods as should be thought fit. And, having considered ane testificat of verie many Noblemen and Gentlemen in the Shire and circumjacent bounds, Testifeing the necessity and conveniencie of the said bridge, and haveing heard the said Johne Williamson thereanent, who, in name of the said burgh, had undertaken the building of the same bridge within the space of two years. And haveing also considered the report of the Commissioners of Parliament appointed for bills and tracling (to whom the said mater was referred) thereanent, His Majestie, with advice and consent of the said Estates of Parliament, Have ordained and ordaines ane contribution and Voluntar collection to be made and ingathered within all paroches, both in burgh and landward, on the South side of the water of fforth, for building of the said bridge, And that either personally or parochially as the Magistrates of the said burgh shall desire. And hereby Seriously Recommends to and require all Noblemen, Gentlemen, Magistrats, and Ministers of the law and gospell, within the said bounds, to be assisting to the said Magistrates of Sanquhar for so good a work, and for ane liberal contribution for that effect. And seeing it is expected that the foresaid collection will not be as considerable as to defray the charges of so great a work, Therefor His Majestie, with advice and consent foresaid, hath given and granted, and hereby give and grant to the said burgh, ane custome to be lifted by them, or any other they shall appoint for uplifting thair of, for the space of twentie seven years after the building thair of, at the rates following— viz., for ilk footman or woman, two pennies Scots; for ilk nolt beast or single horse, four pennies; for ilk horse with his load or rydder, six pennies Scots; And for ilk sheip, two pennies Scots money. And ordaines all passengers what-

somever to answer, obay, and make payment of the said costume, at the rates abovewrin, to the said burgh and their collectors thairof, durance the space above mentioned, but ony obstacle or objection whatsomever. With power to the said Magistrates to put this Act to dew execution, Conforme to the tenor thairof in all points."

The bridge was accordingly restored, but fell again into decay, and the present structure was erected in 1855, by the Road Trustees.

The next place visited was Blackaddie farm house, to examine a black letter inscription on one of the walls. With a little trouble it was deciphered and read as follows:—"William Crichton, Rector of Sanquhar, son of William Crichton of Ardoch." Mr Wilson explained that it was supposed this stone had been removed at one time from the churchyard to the manse for safe keeping, but that in vandalising times it was used in building where it is now. Another view taken is that it sets forth to builders of a portion of the old manse buildings.

Under Dr Davidson's guidance the majority now walked to the chalybeate spring at the foot of the Euchan Glen, and subsequently spent some time in that romantic spot. Here the usual business meeting was held—Dr Grierson presiding—when Miss Dobie, Penfillan House, Thornhill; Mr J. Corrie, Moniaive; and the Rev. J. H. Scott, Sanquhar, were elected ordinary members. On the motion of Mr Barbour, V.P., the Society's thanks were awarded to Mr Wilson and Dr Davidson; after which the party returned to the station and reached Dumfries about eight o'clock. Dr Davidson furnishes the following note of the botanical finds:—At Sanquhar Castle specimens of the Alkanet, *Anchusa semper virens*, *Potentilla reptans*, *Linaria vulgaris*, *Conium maculatum*, the wall rue and black maiden hair ferns, were found. Passing along the "brae heads," *Phleum arenaria* was found growing abundant. *Ethusa cynapium*, a few plants of the evening primrose (*Enothera biennis*) were likewise here observed. In Euchan Glen *Vicia orobus*, *Hieracium tridentatum*, *Rubus saxatilis* (in fruit), *Carduus heterophyllus*, *Gentiana campestris*, *Stachys betonica*, and the green spleenwort were found in fair abundance.

KIRKCUDBRIGHT DISTRICT.—3rd September, 1887.

The last meeting of the Session was held on the above date, when the Society visited the recently discovered archaic sculptur-

ings in the neighbourhood of Kirkcudbright. At the hour of starting (9 A.M.) a small party assembled at the Dumfries station, but their number was increased on reaching Castle-Douglas and Kirkcudbright. On arriving at Kirkcudbright they were met by Messrs M'Kie and Coles, who were to be the guides for the day, and also by Mr Hamilton of Ardendee and several members of the Kirkcudbright Naturalists' Field Club.

The first item on the programme was Loch Fergus, about three miles from the station. At a remote period a loch of the above name existed there, but it has long been drained, and what was once the bottom is now cultivated fields. In the twelfth century Fergus, Lord of Galloway, had his stronghold on one of the islands in the loch, and traces of this and another island were now observed above the level of the surrounding fields. From here the party walked through Glen Lag until High Banks was reached. On this farm a number of the cup and ring markings have been discovered, and were duly described by Messrs M'Kie and Coles during the Winter Session. (See April Meeting.) From High Banks the walk was continued to the site of old Galtway village, but there is not even a house standing now to mark the spot of this once populous place. The next halt was at Low Milton, where the ring marks are different from those discovered at other places in the district. These markings were the first observed in the neighbourhood by Mr W. Thomson of Kirkcudbright, and as that gentleman now formed one of the party he narrated the circumstances under which the discovery was made. On the motion of Mr Coles, the Society's thanks were awarded to Mr Thomson for the action he had taken, and the great interest he had shown in bringing these markings under the notice of the public. In this difficult undertaking he was ably assisted by Mr Hamilton and Mr Hornel, as they took casts of the typical markings and forwarded them to the British Museum, to this, and other societies.

Dunrod Churchyard was next visited, also Knockshinnoch and Balmae, where other markings were seen. A British camp at Drummore subsequently engaged the party, but while there the rain, which had been threatening for some time, began to fall heavily, and necessitated their returning to Kirkcudbright earlier than they intended.

APPENDIX A.

Report on the Conversazione held on 27th, 28th, and 29th October, 1886, Extended.

At a meeting of the Committee, held on the 30th October 1885, it was unanimously resolved to have a *Conversazione* during the ensuing Session, but owing to the death of the late President (Dr Gilchrist) in December, it was deemed advisable to postpone it until the following autumn. At the subsequent general meeting, it was decided to hold the *Conversazione* on 27th and 28th October, and, if circumstances permitted, to extend it to the following day.

In order that the different subjects in which the Society is interested be duly represented, a number of sub-committees were appointed to take charge of the different sections for collecting the exhibits, and superintending them during the time they were on view. It is very gratifying to record that the circular which had been issued to members, friends, acquaintances, and public bodies requesting specimens of local natural history, or objects relating to the archaeology of the district, met with such a hearty response as to fill Greyfriars' Hall; and that every article lent for the occasion was safely returned to the owners. It was arranged that W. H. Maxwell, Esq. of Munches, should open the Exhibition on the 27th (Wednesday) at two P.M., but, in the unavoidable absence of that gentleman through indisposition, the ceremony was performed by the president, Dr Grierson. A nominal charge was made for admission, to cover the expenses incurred, and the attendance during the three days being considerable, there was a balance of £5 12s 3½d in favour of the Society. The income from sale of tickets was £20 13s 6d, and the total expenditure amounted to £15 1s 2½d. During the time the Exhibition was open, a number of the lady members and friends presided at the organ and pianoforte, and other members ably assisted the Committee in arranging the exhibits, and in various ways contributed to make the Exhibition a success.

To describe every article in this unique collection—even if the details of all were at our disposal—would be undesirable, and, instead of doing so, we purpose giving an outline of the Exhibition, and noticing such specimens as are of scientific or archaeological interest.

NATURAL HISTORY DIVISION.

BOTANICAL SECTION.

Flora of Upper Nithsdale.—A collection of typical phanerogamous plants from this locality was exhibited by Dr A. Davidson. These included the rarities described by Dr Davidson in the communications which he read at the winter meetings.

Thornhill District.—Mr Fingland exhibited about 300 specimens, including some rare potamogetons and carices. The rarer ones are described in the Transactions.

Kirkcudbright District.—Mr Coles sent a typical collection of the plants found in this district, and also from the hilly parts of Galloway.

Wigtownshire.—About twenty plants not hitherto recorded for this county were exhibited by Mr M'Andrew. These and others form the subject of a communication read in December, 1887.

Grasses and Carices.—A portfolio of all grasses and carices recorded from Nithsdale, and collected by Mr J. R. Wallace, was exhibited by him.

Mosses.—Over 200 specimens collected in the district, the rarest being *Pottia Heimii* from Gleneaple, by Mr J. Wilson.

Fungi.—A series of 50 beautiful water colour paintings of the larger fungi found in the district, by Mrs Gilchrist Clarke.

Lichens.—A portfolio of lichens by Mrs Gilchrist; representative series from the Society's collection.

Woods.—26 polished sections of the different trees were sent by Mr J. Gibson Starke; and a few other sections by Mr Stobie. A piece of the first larch tree grown in Scotland, at Closeburn, by Mrs Gilchrist.

GEOLOGICAL AND MINERALOGICAL SECTION.

Rocks of Dumfriesshire.—50 specimens sent in by Mr George Johnstone. This collection also included two curious pieces of sandstone, resembling a man's leg and a foot, found in that shape when quarried. For further description see Proceedings of November (1886) meeting.

Minerals.—A collection of various minerals by Mr James Davidson. Two cases collected by the late Dr Gilchrist were lent by Mrs Gilchrist.

Gems.—A case of the different gems found in Scotland, polished and in the rough, was also exhibited by Mrs Gilchrist.

Limestone Fossils, &c.—Several of the fossils from Kelhead, Closeburn, and Carsethorn were shown by Mr J. Wilson. Also, a specimen of the sandstone from Craigs, showing the markings of rain-drops and sun-cracks.

Graptolites.—Several specimens from the Society's collection.

Building Stones.—A six-inch cube, with one surface polished, of the various building stones used was shown by Mr J. W. Dods.

ZOOLOGICAL SECTION.

(1) MAMMALIA.

The Stag.—A pair of antlers of the red deer (*Cervus elephas*), which had been dug out of the sand near Glencaple by a fisherman about thirty years ago, was shown by Miss Borthwick. Another large pair, found near Annan about fifteen years ago, was lent by Mr W. G. Scott.

Fallow Deer.—The head and antlers of the fallow deer (*Dama vulgaris*) were sent by Mr W. Hastings.

Pole-cat.—A pole-cat (*Putorius fatidus*), caught many years ago in Tynron parish, sent by Dr Grierson; also, a badger and two otters.

Smaller Mammalia.—Specimens of hares, rabbits, squirrels, foxes, weasels, stoats, rats, mice, moles (including three white ones), and bats, exhibited by Dr Grierson, Messrs Hastings and Shortridge.

Wild Cat.—A wild cat, caught in the parish of Buittle many years ago, and supposed to have been introduced by some Russian sailors, also shown by Dr Grierson.

(2) AVES.

The Buzzard, Merlin, Kestrel, Sparrow Hawk, Long-eared Owl, Short-eared Owl, Barn Owl, Snowy Owl, several Thrushes and Blackbirds, Jack Snipe and young, Snipe, 2 Choughs caught at Ailsa Craig, Cuckoo (male and female), King Fisher, Rock Dove, Turtle Dove, and several smaller birds—by Mr Hastings. A large glass case containing nearly all the smaller birds found in Tynron parish—by Mr T. Brown. Golden Oriole—*Oriolus galbula*—caught near the Nith in Closeburn parish, and other

smaller birds—by Dr Grierson. Great Buzzard caught at Kinharvie, great northern diver, golden-eyed Duck, and other birds from the Society's Collection. A cuckoo and a small bird, by Mr Gibson. A pheasant, by Mr W. Campbell.

Eggs.—A collection of birds eggs in two large cases, by Mr Douglas Barbour. Several clutches of the eggs of the rarer birds, by Mr T. Brown. Two cases of eggs—Mr J. Rutherford. The shell of a large duck egg, having a perfectly formed shell of a smaller egg inside, was shown by Mr J. Thomson of Midtown.

(3) REPTILIA.

The adder and slow worm, from Society's Collection, and four bottles containing several specimens of the same, by Dr Grierson.

(4) PISCES.

Several specimens from Society's Collection, including the vendace from the Castle Loch, Lochmaben.

(5) MOLLUSCA.

Land and fresh water shells from Society's Collection.

(6) INSECTA.

All the exhibits in this section were lent by Mr Lennon, who was in attendance, and furnished any information required by the visitors.

Lepidoptera.

Diurni.—The collection of *Diurni*, or butterflies, included 63 species, among which the following rarities were noticed:—*Colias Edusa*, *Argynnis Aglaia*, *A. Euphrosyne*, *A. Selene* from Dalscairth, and other localities. *Vanessa Cardui* (this rarity is not unfrequent in some seasons) and *Thecla Rubi*, from Dalscairth and Tinwald Downs; *T. Quercus*, from Comlongan and Goldielea; *Lycena Artaxerxes*, from the Dalscairth and Terregles hills. *Thanaos Tages* from Goldielea hills, and *Hesperia Sylvanus*, Dalscairth.

Nocturni.—The moths were well represented, and included *Smerinthus Ocellatus*, *S. Populi*, *Sphinx Convolvuli*, *Deilephila Galii* from the Crichton Institution Grounds, and *Chærocampa Elpenor* from the Tinwald Downs. *Sesia bombylifformis*, also

from Tinwald Downs, and *Cirura Fercula*, from Dalscairth. *Notadonta Dromedarius* from Kirkconnel, and *Dasychira fascilina* from Tinwald Downs and Dalscairth.

Geometrae. — This family was represented by 214 species, and included *Uropteryx Sambucaria*, *Epione Advanaria*, *Eurymene Dolabraria*, and *Geometra Papilonaria* recorded from Tinwald Downs and Dalscairth. *Melanippe Hastata*, *Scotosia undulata* from Dalscairth, and *Carsia Imbutata* from one particular spot on the Tinwald Downs.

Noctur. — More than 240 species of this extensive family were shown, and included *Thyatira Batis*, *Acronycta Leporina*, *A. Menyanthidis* from the Lochar Moss. *Celena Haworthii*, *Tryphana Fimbria*, *Noctua Glareosa*, *Anarta Myrtilia*, and *Hydrelia Unca* from the Lochar Moss and other places.

Coleoptera.

The collection of beetles was very extensive, Mr Lennon showing representative species in nearly all the British genera.

Hymenoptera.

The bees and wasps were fairly well represented in two cases, also shown by Mr Lennon.

MICROSCOPICAL SECTION.

A table at the end of the hall was set apart to a microscopical display of objects embracing anatomical preparations, sections of plants and rocks, chemical crystals, &c., by polarised light, and a large variety of zoophytes, foraminifera, diatoms, and miscellaneous objects; the microscopes were lent and presided over by Messrs Davidson, Innes, J. Wilson, and Rev. F. Mullins. Other microscopes were lent by Mrs Gilchrist, Mr Grierson, and Rev. R. W. Weir.

ELECTRICAL SECTION.

Several electric batteries; a plate-glass machine, Leyden jars, electrophones, discharging rods, insulating table, &c.; galvanic battery, two Rumkorf coils, mariner's compass, and electro-motor instruments. Two incandescent lamps were lighted daily with a bi-chromate battery; also a patent lighting apparatus and several other apparatus were lent by the Principal of St. Joseph's College, Dumfries.

ARCHÆOLOGICAL DIVISION.

(Names of Exhibitors are given in Italics.)

BOOKS.—Burns' Poems, 1st Edinburgh Edition (1787); a folio Bible Concordance, which belonged to Burns when at Ellisland (1788); Carlyle's French Revolution, 1st Edition, with autograph; twenty volumes by local authors in prose and poetry—*Mr J. Gibson Starke*. Twenty-three volumes by local authors—*Mr James Lennox*. History of Dumfries, Copy of Dr Burnside's MS. History—*Mr W. M'Math*. Lectures by Dr Wightman (Oliver & Boyd, 1834); Sketches from Nature, by J. M'Diarmid (1830); Collection of Reels, &c., by James Porteous (1820); George Thomson's Collection of Scots Songs, 4 vols. (1803)—*Mr F. Gilruth*. Mr M'Diarmid's Scrap-book, 1 vol.; Sermons by Dr Thomas Mutter, of the New Church; Burns in Dumfries, by M'Dowall; Burns' Poems (small 8vo.); Observatory Catalogue; Burns, the Ploughman Poet—*Mr Wellwood Anderson*. Burns' Poems, Kilmarnock Edition, complete—*Mr J. R. Wilson*. A large Bible that belonged to Allan Cunningham's father—*Mrs Aitken*. Philip M'Cubbin's Bible—*Mr James M'Cubbin*, Elvanfoot. Several old books by local authors and others, annotated by Burns—*Rev. W. N. Dodds*. A History of the Wars of Montrose, annotated by Burns; Transactions of the first Agricultural Society of Dumfries (1776)—*Mrs Aitken*. A large Scrap-book, containing interesting cuttings, and an old Valuation Roll of Kirkcudbrightshire—*Kirkcudbright Museum*. Valuation Roll of Dumfries (1807), Valuation Roll of Kirkcudbright (1778)—*Mr Henry Gordon*. Book by Smeaton; Songs of Scotland by Allan Cunningham—*Mr J. Fergusson*. A Lithographed Book, illustrating the different styles of writing, by Craik, a writing master in the Dumfries Academy—*Mr S. Grierson*. The first volume of the *Courier*—*The Courier and Herald Offices*.

BURNS' RELICS.—An exhibition of this description taking place in Dumfries would be singularly incomplete that did not contain a number of interesting memorials of the poet Burns, who was an honorary burgess of the town, lived in it, died in it, is buried in it, and is its everlasting glory. On the occasion of the Burns' Statue Bazaar, held in September, 1880, what was perhaps the largest and richest collection of Burns' relics ever seen was displayed in the Mechanics' Hall. A printed catalogue of the relics, written by the well-informed and affectionate

biographer of that brief and sadly brilliant part of the poet's life that was passed at Ellisland and in Dumfries, Mr William M'Dowall, was issued at the time. A copy of it is preserved in the library of this Society, and its existence renders unnecessary a detailed account of the Burns' relics that enriched our exhibition, for the most and the more valuable of them are there described. We append a list of the articles, with the names of the exhibitors:—"MS. of "The Silver Tassie"—*Mr James Lennox*, Maxwelltown. Cradle—*Mr Welsh*, Dumfries. Letters and other Manuscripts—*Mr John Wilson*, Dumfries. M.S. of "Holy Willie's Prayer"—*Mrs Johnstone*, English Street. Manuscripts and Table—*Mrs Pearce*, Dumfries. M.S. of "The Whistle;" do. of lines on the wounded hare, and Pane of Glass from the Hermitage with verses written on it—*Mr Nelson* of Friars' Carse. Excise Book—*Miss Burnet*, Dumfries. Work-box (of Mrs Burns), Antique Jug, Cup, Punch-bowl, and Prince Charlie's Wine Glass (belonging to the poet)—*Mrs Smith* of the Globe Inn, Dumfries. MS. of "The Whistle," and a Cup (belonging to Burns)—*Dr Rutherford* of the Crichton Institution. Three Receipts, volume "Louisa"—a poetical novel—annotated by Burns, Piece of the Poet's Nursing Chair, Portrait of the Poet, and Bust of his Eldest Son—*Miss Gracie*, Dumfries. Snuff-Mull, Sugar Crusher, and Toddy Ladle, belonging to the poet, and now the property of the Dumfries Burns Club, together with the Club's Punch-bowl, and an Engraving of the Poet—*Mr Henry Gordon*. Two Towels—*Mr M'Clure*, Lockerbie. Auction Hammer used at sale of the Poet's effects—*Mr Arnott*, Newall Terrace, Dumfries. Engraving of the Poet—*Miss Currie*. Portrait, together with Cup and Saucer—*Mrs Dunbar*, Dumfries. Two Receipts for £385 to John Syme—one due by Robert Burns, and the other for mournings by his widow and family; the Poet's Bible, and his Burgess Ticket of Jedburgh—*Mr W. G. Scott*, Dumfries. Portrait of Burns—*Industrial School*, Dumfries. Snuff-box made out of wood of Poet's bedstead—*Mr R. Murray*, Dumfries. Sterne's Works, annotated by Burns—*Rev. W. N. Dodds*, Dumfries. One of the marginal notes written by Burns is as follows:—"I love drinking now and then. It defecates the standing pool of thought. A man perpetually in the paroxysms and fevers of inebriety is like a half-drowned, stupid wretch condemned to labour unceasingly in water; but a now-and-then tribute to Bacchus is like the cold bath, bracing and invigorating.

—R. B." Table, Four Chairs, Wooden Ladle, Tongs and Poker, Manuscript of Letter by Burns to his wife, and a Leaf from his Excise-book—*Mr William Nicholson*, Dumfries. These articles were given by Mrs Burns to her servant, Mary M'Lachlan, when she got married to the late Mr Andrew Nicholson, shoemaker, Dumfries; and they were sold on the 3d February, 1888, by public auction, in Dumfries, on the death of Mr William Nicholson. Two chairs, £12 10s, to Mr William M'Kissock, Plough Inn, High Street, Ayr; another chair, £9 15s, to Mr J. J. Glover, painter, Dumfries; the fourth chair, £8, to Mrs Smith, Globe Inn, Dumfries; the round table, £5 17s 6d, to Mr Reuben Place, furniture and book-dealer, Dumfries; the ladle, £3 5s, to Mr M'Kissock; tongs, £1 12s, to Mr Andrew Lawson, Dumfries. Greatest interest centred in the sale of the MSS. The letter was one written by Burns to his wife a few weeks before she joined him at Ellisland, and has been published in Dr Hatley Waddell's edition of his works. Its value is lessened by the absence of the signature, which Mr Dunbar explained Mr Nicholson had been prevailed upon to cut off and give to the late Colonel Grierson; and it is slightly torn at several places. It is written on the two sides of a single quarto sheet. The following is a copy of it:—

Ellisland, 12th Sep., 1788.

MY DEAR LOVE,—I received your kind letter with a pleasure which no letter but one from you could have given me. I dreamed of you the whole night last; but, alas! I fear it will be three weeks yet ere I can hope for the happiness of seeing you. My harvest is going on. I have some to cut down still; but I put in two stacks to-day; so I [am] as tired as a dog.

. . . get one of Gilbert's sweet milk cheese, and send it.

[On] second thoughts I believe you had best get the half of Gilbert's web of table linen, and make it up, though I think it damnably dear; but it is no outlaid money to us, you know. I have just now consulted my old landlady about table linen, and she thinks I may have the best for two shillings per yard; so, after all, let it alone until I return, and some day soon I will be in Dumfries and will ask the price there. I expect your new gowns will be very forward or ready to make against I be home to get the Baiveridge. I have written my long-thought-on letter to Mr Graham, commissioner of excise; and have sent him a sheetful [of poc-]try besides. Now I talk of Poetry, I had . . . Strathspey long in hands of . . . for Johnson's Collection.

This manuscript went at relatively the lowest price of any article in the collection, being purchased by Mr James Richardson, 82 Queen Street, Glasgow (a loyal Dumfriesian) for £3 5s. Mr Richardson was also the purchaser of the leaf from the Excise

book, which brought £1 more, viz., £4 5s. It is a record of visits made to various places within Burns's official circuit at which brewing was carried on, with entries of the quantities of material observed and other items of information required by the Excise authorities. The following is the order of calls on what seem to have been four different journeys, viz.—Thornhill, Penton, Cairnmill, Tyneron, Crossford, Dunscore. Residence—Ladyfield, Conheath, Glencaple Quay, Glencaple, Bowse, Home. Residence—Park, Drumwhinnie, Kirkgunzeon, Enterkinfoot, Slunkford, Sanquhar, Whitehill, Sanquhar.

BRONZES.—A Bronze Pot, 8 inches in height, 5 inches greatest diameter, $2\frac{3}{4}$ inches diameter at the top—*Mr Maxwell* of Munches. Three Bronze Pots found more than twenty years ago—one near Lotus, another near the Maxwelltown Loch, and the third a small one (a ewer), in perfect condition, in Carlaverock parish—*Mr J. B. A. McKinnel*.

CELTS, &c.—The collection of stone and bronze celts was large, and included eleven stone and two bronze of the ordinary types from Wigtonshire—*Mr Armstrong*. A stone celt found at Kelton, Dumfries—*Mrs Gilchrist*. Two perforated stone axes, four stone celts, two stones with depression wrought on each face, half of a stone mace head faceted, the only one recorded from Galloway; two perforated stones (use unknown), three grinding stones, one bronze palstave, one bronze celt, &c.—*Sir Herbert Maxwell*, Bart., M.P. A perforated axe head, $10\frac{9}{16} \times 5\frac{3}{8} \times 3\frac{1}{4}$ inches, with a cutting edge of 3 inches, weight 10 lbs. 1 oz., found near Auchencairn about fifteen years ago, one, if not the heaviest known of recorded celts; a small stone celt, $5\frac{1}{8} \times 1\frac{3}{8} \times 1\frac{1}{8}$ inches found at Clonyard in 1886—*Mr Maxwell* of Munches. A celt found at Mabie Moss, $4\frac{3}{4} \times 2\frac{1}{4} \times 1\frac{1}{8}$; a perfect flint arrowhead, found on the farm of Knoekgray, Carsphairn, $2\frac{1}{4} \times 1$ —*Mr James Davidson*. A bronze celt, found at Cowshaw, and two stone celts—*Mr J. Rutherford*.

LETTERS.—The following letters were lent by the Dumfries Town Council, and are interesting :—

Registered 2nd October, 1533 — “Great Seal Register.”

“*Rex confirmavit literam allutariis Burgh de Edinburgh sub hac forma.*”

Till all men be it kend, &c., the Prowest, Bailies, Consale, Communitie, and Dekynnis of Craftis of the burgh of Edinburgh, greeting :—Compearit befor us sitand in judgment the Dekyn, Kirkmasteris, and Brethir of the Craft of Cordinaris within the said burgh, viz.: Thomas Murelyis, Dekin ;

James Litaljohne, &c., and the remanent of the hail brethir of the said craft, and presentit their bill as efter follows :—To yow, my lordes Prowest, &c.—Quhair it is weill knd till all your wisdoms how for louing of God and upholding of dewyne service we mak great reparatioun and expens at our altare of Sanctis Crispin Crispinian, situat within your college kirk of Sanct Geill, and has na leving to uphold the same and daily chaplain thairat but our weekly pennie gaderyt amangis the brethir of the said craft, quhilks are but a few nawmer to the regaird of nthir great craftes within this burgh, quhilk has grantit to thaim weeklie on the mercat day anc penny of all stuff belanging their craftis, brocht fra landwart, to be sauld for sersing (trying, proving) of the gudness and fyness tharof, sau that Our Soverane lord & his liegis be nocht begylt tharewith anent the unsufficientness of the saime, &c.—At Edinr., 17th Sep., 1533.

Copy.

Privy Council Letter.

Edinr., 18th July, 1679.

“The Lordis of His Majesties Privy Council, considering that Maister William Macmillan hath been for a long tyme past prisoner within the Tolbooth of Drumfries, upon the accompt of Conventicles, and being certainlie informed that the Rebels lately in arms (Covenanters of Battle of Bothwell Brig in June previous and then last bygone) did make open the said Prisone and put him at liberty, and entysed him to go alongis with thaim; and that the said Mr William did declare to the saidis Rebels that he would not own his liberty from them, but would come out by that same authority that inprisoned him, and accordingly he returned back into prison, where he yet remains.

“The saidis Lordis, upon the consideration foresaidis Doe Ordain the said Magistrates of Drumfries to sett the said Maister William Macmillan at libertie.

“Extracted by me,

“(Signed) ALEXR. GIBSON.”

Letter of Mr Adam Broun.

Direct yours for me to the care of Nicol Spence, writer, at his house over against the Bowheid Well, Edur.

To

William Coupland of Collistoun, Provost of Dumfries.
(Anent the Jacobites, &c.)

Edinburgh, 15th September, 1704.

SIR,—The insolent boastings of the Jacobite party, and the preparations they have made and are making of arms and ammunnition through the whole kingdom, their secret caballings and consultations with the Papists and others come from France, and many other circumstances of things not fitt to be communicate by anc ordinar missive, give the well-affected of the nation just grounds to fear they have some bad designs on foot against the present establishment, both of Church and State, which we know not how

soon they may execute by forcing upon us a Popish successor, and cutting off all who shall oppose them in their designs.

The convictionis of this our imminent danger hes engadged some of our good friends of all ranks now on the place who wish well to Her Majestie and present establishment, to meet together and to consult of means which, through the blessing of God, may prevent the stroak ; and in order to this it is thought necessary to let the country understand thair danger, and to make the grounds of our fears as public among the well-affected as can be, and to fix a correspondence with the honest partie of the whole nation, that we may understand the state of the country, the number of these we may reckon upon as our friends, how they are armed, what number of arms will yet be wanting, How arms and ammunition may be provided and distributed, How the people may be modelled, and that overtures for effectuating these may be interchanged and communicated ; and for that purpose they have made choice of some persons who are of known prudence, interest, and zeal, to meet weekly thereto, receive account thair of, and to consider how to forward this good design ; also, there is chosen out of each slyre and some considerable Burghs and Townes one or more well-affected and of general acquaintanee and influence, to take their own prudent wayis for making tryall of these things, and who may pitch upon other persons to join and concert with them in this affair, and who may keep a constant correspondence with these here at Edinburgh, that we both may understand what is done here, or advised to be done, and may communicate our measures each to other. And you are pitched upon for the Burgh of Drumfries as a fit person for that purpose, having all the qualifications requyred for managing such a design. And it being understood here that I, having the honour of your acquaintanee, its laid upon me to write this to you to intreat your assistanee in this work, which tends so much to the security of the present establishment of this Church and nation, and of all the Protestant religion in general, which is in imminent danger from the attempts of a Jacobite party in this nation, considering the present posture of affairs, and to allow of this as the beginning of a correspondence which our friends in this place for our common safety, the rather expected since it is agreeable to the Act for the Seecurity of the Nation now past in the last session of Parliament, whereby we are warranted to do all that's here recommended, wherein if we be wanting we can never answer to God, the Church, or the Nation, but must lay our accounts to be ane easy prey to a furious and enraged enemy. And if by your return to this you signifie your willingness to assist us you shall have further particulars by the next, from Sir, your most humble Sert.,

(Signed) ADAM BROWN.

In addition to the above, there was another letter from the Deputy-Governor of Carlisle, dated "ye 28th May, 1689," conveying the Lieutenant-Governor's thanks to the Provost of Dumfries for being so hearty in the King's service, "and that you clap up ill men" and deserters who came across the border. A letter written by Boswell to an early friend, John Johnstone of Grange, Ammandale, was shown by *Mr Thomas Johnstone Carlyle.*

MANUSCRIPTS.—This section formed one of the most interesting in the Exhibition, and many valuable documents were now shown in public for the first time. Space will not admit the reproduction of them here, but the following is of special interest to those residing in this district, and for which we are indebted to *J. Dickson, Esq.*, Perth. It is “The True Solemn League and Covenant,” as signed and adhered to in Dumfriesshire in Anno 1638 of its promulgation. The Dumfriesshire impression reproduced the prescribed text of the General Solemn League and Covenant, and mentions that it was engrossed by “Maister William Ramsay, Commissar Clerk of Drumfries,” and who appears to have been “26 March, 1642, the heir of Maister Thomas Ramsay, minister of St. Michael’s, Drumfries, his father, in five merklands of the kirklands of Kirkbryde Church and Parish, Dumfriesshire.” The document, which is of parchment, 26 inches by 22 inches, was written all over, and was intended to chiefly represent the “Parichiones and Indwellaris within the Parichiones of Carlaverock and Rivell,” as well as of Dumfriesshire generally. In the following list of signatures the prefix of “M” for “Maister” defines the rank of the elder members of the clergy, the Provost of Dumfries, and other worthies; while the proprietors are designated by the names of their lands:—

Ministers of Dumfriesshire and others, who sign the Covenant in their own handwriting, and do so in the following order, &c., viz.:—

Maister Francis Makgill, at Kirkmichael; Maister Johnne Corsane; “Nithisdail;” “Lag;” A. Weil; “Closeburn;” Johnne Charteris (of Amisfield?); “Apilgirthe;” Kirkpatrick; “Craigdarroche;” John Douglas, Mouswald; W. Henryson, at Loehmaben; N. Rogers, at Tundergarthe; W. Rowatt, at Cummertrees; Maister Alexander Makgoune, at Mouswall; Symon Johnstone, Annand; M. Hammiltoune, Westerkirk of Esdail; John Broune, minister at Glencarne; Richard Broun, at Tynron; Alex. A. Hannay, at Closburne; Maister Samuel Austin, at Penpont; Geo. Cleland, at Durisdeir; Maister Archibald Watson, Kirkeonnell; J. Hope, . . . ; Halbert Gledstanis, at Troqueir; H. Hope, at Cowenn; Mr John Weir, at Mortoune; J. Broun, at Irongray; M. Ghar, at Kirkmahon; M. Makjore, at Carlaverock; Mr Geo. Blake, at Dinseore; Maister Alex. Gray, at Lochruton; R. Hercis, at Drysdail; Maister John Macgumrie, at Holywood; Mr Tho. Melvill, at Terregles; Mr David Ramsay, at Newabbay; Maister Umphray Lynd, at Thorthorwald; M. Hareis, at Tinwalle; P. Broun, at Trailflat; B. Sandersone, at Keir; A. Brown, minister of Kirkpatrick Durham; G. Gledstains, at Troquier; Maister Geo. Pryd, minister of Houtoune; Maister John Young, at Apilgirth; N. Henryson, minister at (Dumfries?); Maister William Graham, at Drumfries; Maister James Hammiltoune, minister at Drumfries; James

Douglis ; J. Menzies, Auckinsell ; Robert Maxwell ; James Smythe of Drumclyer ; Andw. Kirke of Glen ; Andrew Wilson of Gargland ; W. Hammitoune, at Kirkgunzeaine ; Maister Thomas Bel, at Middlebye ; Maister Thos. Chalmers, at Kirkpatrick ; Mark Brown, Homer Maxwell, James Maxwell, Maister Francis Irving, minister at Trailflat ; M. Lyndesay, M. Young at Ruthwall ; Thomas M'Burnie, N. Broome at Dunscore ; Mr C. Archibald, expectant.

Carlaverock.—Signatures of Thomas Dickson, William Maxwell in Bankende, James Mackinnell, Robert Paterson, schoollmaster, William Dickson of Zet, William Dickson Hedis, Thomas Martein, Edward Martein, Thomas Allan, Thomas Martein, Edward Maxwell in Bankende, James Edzer in Carmuck, John Richartson, William Dickson, James Turnbrig.

Here the holograph signatures end, and the general text and narrative is pursued as under, viz.:—"Herbert Gledstanes in Knok-Horne, John Maxwell in Bourlands, John Heslope thair, John Huttoune in Conhathie, John Makbrair in Bourlands, and John Jeardin in Conhathie ; John . . . Herbert Jeardin thair, William Macburnie in Howmaynis, John Dune in Glencaple, John Dune, tailzeor thair, John Rawling, within the Yett thaire, John Rawling, callit 'Charlie's John,' in Glencaple, William Dune thaire, Thomas Mairtein in Hiemaynes, John Dune thaire, John M'Kie in Glenhowane, John Edzeir thaire, Nicoll Edzeir thaire, David M'Kie in Lantounsyde, Robert Edzeir in Lanrikland, Richard Dune in Conhathie, Samuel Rawlyng, smith in Bankende, John Blaikstoke, tailzeor thaire, John Murray thaire, Edward Heslope Wobster thaire, Symone Edzeir in Woodend, Thomas Edzeir in Bankend, Thomas Rawling in Glencaple, James Martein in Hiemaynis, Robert Caird in Bankend, David Rowle in Greenmylne, Thomas Glessel Smythe thaire, William Heslop in Scherrington, John Fergusson thaire, Thomas Edzeir thaire, Thomas Rae thaire, John Martein, son to umquhile, William Martein in Blaikschaw, John Adamesone thaire, John Edzeir of Carmuke, John Fruid Wobster in Blaikschaw, John Dickson sone to umquhile C. Dickson chapman thaire, John Dune thaire, William Baitar thaire. John Dickson sone to Thomas Dickson thaire, Robert Syme thaire, James Syme thaire, John Martein in Midtoun thaire, John and Robert Brewes (Bruce) thaire, Clement and John Dickson thaire, Andro Batie thaire, William Corsebie Smythe thaire, Robert Nicolson thaire, John Brewhaus, John Dune thaire, John Browne thaire, William Jephrey thaire, Thomas and John Makquharie thaire, William Fruid thaire, Jno. Makquharie, Thomas Japhray younger thaire, John Anderson thaire, Thomas Forsythe thaire, John Anderson elder thaire, John Japhray thaire, John Blaikstok thaire, John Brande thaire, William Fruid Wobster thaire, William Hyne thaire, John Fruid thaire, John Fruid his servand thaire, John . . . in Kirkblane, John Heslope in Hiemaynes, Robert Forsythe thaire, John Culeane in Lands, John Rawling in Glenhowane, John Cairlell at Greenmylne, William Fergusone in Scheiringtoun, Thomas Rawling in Glencaple, John Stormont in Blaikschaw, Robert Huttoun in Conhathie, John Forsythe in Blaikschaw, Edward Nicolson thaire, Robert Jeardine in Conhathie, Edward Edzeir in Glenhowane, William Hair in Kirkblane,

Thomas Huttoun servitor to Maister Wm. Macjore, minister at Carlaverock, Johne Makkeawne in Bankend, Robert M'Burnie in Kirkblane, James Jamesone in Kirkland of Carlaveroke, Robert Dickson in Blackshaw, Johne Huttoun sone to Johne Huttoun in Conhaithe, John Rawling son to John Rawling in Glenceple, John Dune thaire, John Stott in Hiemaynes, John Rawling son to Johne Rawling in Glenceple, Johne Rawling, son to John Rawling in Cargane, Johne Man in Glenhowane, Johne Dune in Hiemaynes, Robert Edzeare son to Edward Edzeare in Glenhowane, John Smythe in Bankend, Robert Fruid sum tyme in Ireland, now in Blackshaw, William Dune in Glenceple, John Paterson thaire, John Mitchelson servitor to Johne Dickson in Scheringtoun, Thomas Heslope in Scheringtoun, Robert Dougalsone in Hiemaynes, John Herronne in Glenceple, Nicol Dougalsone in Hiemaynes, Johne Wright servitor to William Dickson in Yett, Thomas Ferguson in Glenceple, Thomas Japhray, Elder in Blackshaw, Johne Myllar, Elder in Bankend, all leivand within the parochine of Carlaverock, Thomas Jameson in Over Locharwood, Johne Hair thaire, Robert Edzeare thaire, Thomas Anderson thaire, Clement Dickson thaire, parichiones and indwellaris within the parochine of Rievall. Subscryveris conforme to the Declaratione of the generall assemble within written with our handes at the pen led be the notaries undirsubscriband at our command becaus we can not write ourselffe."

The mandatory of the several signatories is—*Ita est Musr. Gulielmus Makjore, pastor Ecclesie Dei apud Carlaverok*: "By Maister William Makjore, my pastor, at my command," &c.

Here the said attested signatures begius as follows, viz.:—" *Ita est Jacobus Thomson, Notarius Publicus in premiss regni situs de mandatus dictarum personarum scribere nescientium ut assensum manu propriu. Ita est Magister Gulielmus Rig, Notarius Publicus, &c., Imprimis.* Andro Japhra in Blackshaw, Thomas Edzeare in Bouhous, Johne Japhra in Blaikshaw, Johne Martein thaire, Johne Dunbar, Maysone in Bankend, Johne Murray younger, Robert Anderson in Blaikschawe, Nicoll Martein thaire, Matt. Nikolson thaire, Wm. Blaikstoke thaire, Hew Macquharrie thaire, Robert Macquharrie thaire, Robert Mitchelson thaire, Thomas Dickson thaire, Robert Dickson thaire, Robert Purdame thaire, William Dickson thaire, Edward Browne thaire, John Purdome thaire, Patrick Mitchelson thaire, John Herries thaire, Robert Wilson thaire, Gowan Purdome thaire, Thomas Rawlin in Carmuke, Richard Dickson in Blaikshaw, Mark Rawling in Glenceple, Johne Miller in Bankend, Johne Mackowne in Carmuke, John Edzeare in Bankend, George Browne in Bowhouse, Thomas Stott in Scheiringtoun, Johne Adamsone in Glenhowane, Richard Dickson in Kirkland, William Blaikstoke in Glenceple, Thomas Adamsone in Scheiringtoun, and Thomas Randell, maysone thaire, all parichiones and inhabitantis within the parochine of Carlaverocke, subscryvit acording to the determination foresaid with our handis at the pen led be the Nottar undir wryttene at our command becaus we can not wryte ourselfis. *Ita est Jacobus Thomsons, Notarius Publicus, &c.*

As also—

Edward Broune, merchant in Blackshaw, John and William Neilsones

thaire, Christie Keltun thaire, William Martein thaire, Symon Gunzung in Kirkblane, and William Edzar in Holinbus, parichoners and inhabitantis of Carlaverock, subscribe the within written covenant conforme to the within written declaratione with our handis at the pen led by Mr William Makjore, our pastor, &c.

I, Richard Browne in Kirkland (by Mr Makjore, &c.) subscribe in the same terms, &c.

Martin Browne in Kirkland, James Keltoun in Blaiksehaw, William Adamsonne in Scheringtounne, with our hand at the pen, subscribe by hands of the Notary.

Jonah Carrell servitor to Alexander Maxwell of Conhaith, and Alisone Corsene, spouse to Thomas Garmesone, Mark Broune in Kilblane Adam Broune his son thaire, and Thomas Maxwell in Hiemains, John Lawson servitor to my Lord of Nithisdail—we John Fruide, Clement Dicksonne, Wm. Edzear, and James M^rWilliam, also John Maxwell, son to Wm. Maxwell the cook—all subscribe, &c., by Maister William Makjore our pastor, &c.

The Charters of the Burghs of Dumfries and Kirkcudbright, lent by the respective *Town Councils*.

PORTRAITS.—A portrait of Miller of Dalswinton, by Nasmyth, and of Provost Gregan—*Miss Gregan*. A miniature portrait of Mr Craig of Arbigland, a portrait in wax and a miniature in oil of Provost Staig, and in crayon of the Rev. James Gatt—*Mr J. Gibson Starke*; of Provost Kennedy—*Mrs Newbigging*; of Carlyle, Edward Irving, and Mrs Carlyle—*Mrs Aitken*; miniature in oil of Prince Charlie—*Miss Richardson*; of Miller of Dalswinton, of Mrs Miller and her two daughters, and of Mrs Miller, by Nasmyth—*Mrs Hay*; of Provost Leighton—*Mr M. Leighton*. A portrait of the eldest son of Burns, of Mr Gracie (banker), Mr Copland of Collieston—*Miss Gracie*; of Wm. Sharpe, of Colonel Clarke-Kennedy—*Mr H. Gordon*; of Provost Staig and Mr Ewart—*Mr S. Brown*; of Rev. F. Small—*Dean Turner*; and of the noted character of fifty years ago, Jamie Queen—*Mrs Pearce*. An engraving of the Rev. Dr Burnside—*Mr Weir*; a miniature of the Rev. Dr Scott—*Mr Gillies*; the Earl of Glencairn—*Mr Robert Murray*; and portraits of Provosts Shortridge and Gillies—*Mr A. Sharpe*. In the centre of the Hall and place of honour was a large autotype of the late President, Dr Gilchrist; and on the opposite side of the Hall was a large crayon drawing, by a member, of his Grace the late Duke of Buccleuch.

PICTURES.—This collection embraced a large series of engravings, old and modern, of the historical buildings and places of interest in the two counties, among which were:—Views of

Sweetheart Abbey, Old Dumfries—*Mr James Lennox* ; a portfolio of engravings—*Mr W. M'Math* ; an engraving of Sweetheart Abbey, from the painting of R. A. Riddell (1780), of the Old Bridge of Dumfries, view of Dumfries (1824), and Plan of the Burgh of Dumfries and Maxwelltown in 1819—*Mr J. Gibson Starke* ; of Craigenputtock, the Old Bridge of Dumfries—*Mrs Aitken* ; an engraving of the New Church, two views of Dumfries—*Mrs Payne* ; of Lincluden Abbey—*Mr Geo. Thomson* ; and a sketch in pencil ("The Playfellow") by Thorburn—*Mr W. Allan*. An oil painting of Caerlaverock Castle, by the artist—*Mr Fergusson*. A large series of engravings, framed and unframed—*Mr J. Barbour*. Several engravings of Burns and places connected with him—*Mrs Smith*.

WEAPONS.—A claymore bearing the inscription : "Presented by Archibald, Duke of Douglas, to Thomas Tinning, for capturing the Chevalier's secretary and other rebels in 1745 ;" a claymore (Andrea Ferrara) that belonged to one of the Earls of Traquair, and which has been at Terregles House for a long time ; a very fine claymore (Andrea Ferrara)—*Captain Maxwell*. A sabre and a brass horse pistol that belonged to the Maxwells of Breoch from time immemorial—*Mr W. J. Maxwell*. An Andrea Ferrara blade that belonged to the Black Douglas, and supposed to be the one with which he killed the wild boar—*Mr Jos. Harper*. A battle-axe, two Andrea Ferrara claymores, and a double-barrel gun with flint locks—*Miss Copland*, Abbey House. War-pykes and scythes that had been issued to the inhabitants of Dumfries at the time of the suspected French invasion—*The Town Council*. A sword of Paul Jones—*Mr Dinwiddie*. A revolver and a breechloading pistol invented by James Wallace of Wallacehall, Glencairn, over eighty years ago. The revolver is mostly of brass, with a wooden handle, and has four stout brass barrels, which revolve so that the touch-hole of each comes in succession to the flint-lock when required to be fired. The pistol is also of brass, with a wooden handle and a flint lock. It is loaded at the breech, and the principle of the invention was intended to apply to cannon—*Mr J. R. Wallace*, Auchinbrack. Two bronze spear heads found near Dumfries, and two old pistols—*Mr James Lennox*. A silver-mounted and engraved pistol found at Dryfe Sands—*Mr J. Gibson Starke*. A brace of old pistols—*Mr H. Gordon*.

MISCELLANEOUS OBJECTS.—An ancient carved oak door, bearing

the initials of William, Lord Herries, and dated 1601, with an allegorical design representing an elephant with a howdah on its back, supporting a unicorn and a lion fighting; the unicorn has driven his horn into the open mouth of his antagonist, and through the head—*Captain Maxwell*. A walking cane of Lady Winefred Maxwell of Terregles, who died in 1801, with a gold top bearing a heraldic device—an eagle displayed, and a savage or wild man, with the motto, “Sequamur;” footman’s stick of the same period—*Captain Maxwell*. A cartouch that belonged to Robert Maxwell of Breoch (1804); fragments of pottery found in the moat at Carlaverock—*Mr W. J. Maxwell*. Part of the oak cornice of one of the rooms of the Castle of Dumfries, found when taking down the New Church in 1867; Provost Crichton’s baton, used during the Dumfries Meal Riots—*Mr James Davidson*. One guinea note of the Commercial Bank, Dumfries (1804), antique perforated silver needle-case, model of an old spinning-wheel—*Mr J. Gibson Starke*. A Trades’ jug, the Provost’s staff of Dumfries—*Mr James Lennox*. A seal of the Burgh of Whithorn, ditto of Whithorn Abbey, the crest of the Galloway Family (a drawing)—*Mr J. G. Kinna*. Several old plates, including one of Prince Charlie—*Mr R. Gillies*. The Stakeford Jug, several old newspapers, glovers’ minute book, handwriting of Paul Jones—*Mrs Hay*. Thirty and a half sheets of old theatrical bills—*Mr W. Anderson*. The silver gun and the silver arrow of Kirkcudbright, a Dalswinton bell, twenty-eight packets of Communion tokens, representing the different parishes in the Stewartry; scrap-book, &c.—*Kirkcudbright Museum*. The “Siller Gun” and the burgh standard weights and measures—From the *Town Council of Dumfries*. The deacon of tailors’ staff, a box made by the French prisoners when in Dumfries—*Miss Currie*. An old clock, several old cups and saucers, glass bottles, candlesticks, a carved box, &c.—*Mr Armstrong*. The shoemakers’ flag—*Mr John Wilson*. The trades’ flag—*Mr George Thomson*. The joughs which were formerly at the Market Cross, Lochmaben—*Lochmaben Town Council*. A pair of thumbikins—*Mrs Gilchrist*. The trades’ punch-bowl—*Mrs Dunbar*. The joughs from Moniaive, a spinning-wheel—*Dr Grierson*. The King’s Speech (9th January, 1716), Charter, &c., of the Earl of Nithsdale—*Mr T. A. Currie*. A small model saddle, pair of wooden compasses, powder horn dated 1782, four leather snuff mulls, one snuff-box made of the wood of Burns’ bedstead—*Mr Robert Murray*.

APPENDIX B.

LIST OF MEMBERS OF THE SOCIETY, APRIL 1888.

(Those who joined the Society at its re-organisation on 3d November, 1876, are indicated by an asterisk.)

MEMBERS FOR LIFE.

Date of Election.

- 7th July, 1883—Dinwiddie, Robert, Hawthorn Bank, Dumfries, and 117 West, Forty-three Street, New York.
 6th Aug., 1887—Dobie, Miss, Penfillan House, Thornhill.
 11th Nov., 1881—Douglas, W. D. Robinson, of Orchardton, Castle-Douglas.
 3d May, 1885—Herries, Alex. Young, of Spottes, Dalbeattie.
 3d March, 1884—Maxwell, W. H., of Munches, Dalbeattie.
 6th Feby., 1880—Maxwell, Captain, of Terregles, Dumfries.
 3d May, 1884—Johnstone, J. J. Hope, Captain, of Rachills, Lockerbie.
 7th June, 1884—Stewart, Mark J., M.P., of Southwick, Dumfries.

ORDINARY MEMBERS.

- *Adair, John, High Street, Dumfries.
- 2d Feby., 1883—Adams, James, do. do.
 *Allan, William, Irving Street, do.
 5th Jany., 1883—Aitken, Miss, The Hill, do.
 5th Jany., 1883—Aitken, Miss M., do. do.
 5th Nov., 1886—Aitken, John C., do. do.
 1st Dec., 1882—Anderson, William, of Netherwood, Dumfries.
 1st Dec., 1882—Armistead, J. J., The Solway Fishery, do.
 8th Jany., 1886—Aitken, Dr J., Asylum House, Inverness.
 3d Sept., 1886—Arnott, J. M'Lellan, Fernlea, Dumfries.
 3d Dec., 1886—Anderson, Rev. Wm., Newall Terrace, Dumfries.
- 6th Oct., 1882—Bailey, W., *Courier and Herald Offices*, Dumfries.
 7th Dec., 1883—Baird, A., Marchbank Terrace, Dumfries.
 4th Jany., 1884—Baird, Mrs, do. do.
 3d Dec., 1880—Barbour, James (Architect), Dumfries.
 5th Dec., 1884—Barbour, Mrs J., St. Christopher's, Dumfries.
 4th April, 1884—Barbour, Robert, do. do.
 4th Nov., 1887—Barbour, J. H., do. do.
 4th March, 1887—Barbour, Robert, Belmont, Maxwelltown.
 8th Jany., 1886—Barbour, Miss, do. do.
 4th Jany., 1878—Black, Charles, Arbigland, Dumfries.
 1st Dec., 1876—Bowden, Major, Irving Street, Dumfries.
 8th Oct., 1880—Brown, J., Drumsleet, Dumfries.
 1st Jany, 1881—Brown, T., Auchenhessnae, Penpont, Thornhill.
 7th Feby., 1879—Bruce, T. Rae, Dalshangan, New-Galloway.
 2d Feby., 1883—Burnet, Miss, Albany Place, Dumfries.
 2d March, 1883—Burnside, Miss, Buccleuch Street, Dumfries.
- 5th March, 1886—Callander, Dr J., Dunscore.
 4th Jany., 1878—Callander, John, High Street, Dumfries.
 5th Nov., 1880—Chimmoek, E. J. (Rector), The Academy, Dumfries.
 7th March, 1884—Carnegie, D., Castlebank, Dumfries.
 4th April, 1879—Chrystie, R., Buccleuch Street, Dumfries.
 4th March, 1887—Chrystie, Miss L., do. do.
 5th March, 1880—Clark, J. J., Irish Street, do.
 4th April, 1884—Craig, J. (Solicitor), Irish Street, do.
 5th Dec., 1884—Craig, W. T. (Solicitor), do. do.
 6th June, 1885—Coghlan, J. (Inland Revenue), Castle-Douglas.
 11th Nov., 1881—Coles, F. R., The Hermitage, Tongland, Kirkcudbright.
 6th Aug., 1887—Corrie, John, Moniaive, Thornhill.
 1st March, 1878—Coupland, W. A. F. B., Nithsdale Mills, Dumfries.

- 5th April, 1878—Culton, J., of Dildawn, Castle-Douglas.
 *Cunningham, Dr J., Dumfries.
- 5th Nov., 1886—Costin, William, Maxwelltown.
- 5th Feby., 1886—Cumming, John, English Street, Dumfries.
 *Davidson, James, of Summerville, Dumfries.
- 1st Dec., 1876—Dudgeon, P., of Cargen, Dumfries.
- 6th May, 1881—Davidson, A., Chief-Constable, Kirkcudbright.
- 5th Jany., 1883—Davidson, Dr A., Sanquhar.
- 6th Oct., 1882—Dickie, W., *Standard Office*, Dumfries.
 *Dinwiddie, W. A. (Manufacturer), Dumfries.
- 2d Nov., 1883—Dods, J. W., St. Mary's Place, Dumfries.
- 1st Dec., 1882—Dunbar, W., Castle Street, Dumfries.
- 1st July, 1882—Duncan, J., *Annandale Herald Office*, Lockerbie.
- 5th Feby., 1886—Dryden, Dr J. H., Dumfries.
- 5th Oct., 1877—Fraser, Rev. James, Colvend Manse, Dalbeattie.
- 7th May, 1887—Fergusson, J. Gillon, of Isle, Dumfries.
- 6th Oct., 1879—Fergusson, J., 17 Castle Street, Dumfries.
- 5th Jany., 1883—Fingland, J. (Chemist), Thornhill.
- 2d Oct., 1885—Fotheringham, R. P., Corn Exchange, Dumfries.
- 2d March, 1888—Fraser, Thomas, High Street, Dalbeattie.
 *Graham, Rev. W., Maxwelltown Manse.
 *Gibson, W. G., Clerkhill Cottage, Dumfries.
 *Grierson, Dr T. B., The Museum, Thornhill.
- 2d June, 1883—Gilchrist, Mrs, Linwood, Dumfries.
- 1st Dec., 1882—Gillies, Miss, King Street, Maxwelltown.
- 2d Feby., 1883—Gilruth, F., The Academy, Dumfries.
- 6th Jany., 1882—Grierson, W., of Chapelmount, Dumfries.
- 6th Oct., 1882—Grierson, J., Town-Clerk, Dumfries.
- 7th Aug., 1886—Graham, Thomas, Post Office, Ecclefechan.
- 5th Nov., 1885—Grierson, S. E., Alpine House, Dumfries.
- 5th Jany., 1877—Halliday, W., College Street, Maxwelltown.
 *Hastings, W., 36 English Street, Dumfries.
- 3d Feby., 1882—Herries, James, Loreburn Park, do.
- 1st Feby., 1878—Hogg, James, Saughtree, do.
- 6th Feby., 1880—Hope, Sheriff, Dumfries.
- 2d Nov., 1887—Houston, James, Greyfriars' Street, Dumfries.
- 7th Aug., 1886—Hair, Archibald, Durisdeer Schoolhouse, Thornhill.
- 6th April, 1888—Hannay, Miss, Victoria Terrace, Dumfries.
- 6th April, 1888—Hannay, Miss J., do. do.
- 7th Dec., 1883—Innes, Alexander, Saughtree, Dumfries.
- 2d March, 1877—Johnstone, George, Castlemilk, Lockerbie.
- 2d July, 1887—Jardine, Alex. (solicitor), Thornhill.
 *Kerr, Dr, Dumfries.
- 5th Nov., 1886—Kerr, John, Blountfield, Ruthwell.
- 6th Jany., 1888—Kerr, Thomas, 2 Loreburn Park, Dumfries.
- 7th Dec., 1883—Laing, T., Noblehill Schoolhouse, Dumfries.
- 1st July, 1882—Laurie, J., Tynron Schoolhouse, Thornhill.
 *Lennon, W., Brooke Street, Dumfries.
- 5th Jany., 1883—Lennox, Ex-Provost, Dumfries.
 *Lennox, James, Edenbank, Dumfries.
- 5th April, 1878—Low, T. E. (Chemist), Dumfries.
 *Maxwell, John, King Street, Maxwelltown.
- 5th April, 1878—Maxwell, J. H., *Kirkcudbrightshire Advertiser Office*,
 Castle-Douglas.
- 4th Jany., 1878—Matthewson, James, 18 Copeland Street, Dalbeattie.
- 6th Oct., 1879—Maxwell, W. J., Terregles Banks, Dumfries.
- 1st Oct., 1886—Maxwell, Wm. Jardine, of Terraughtie, Dumfries.

- 5th Nov., 1886—Maxwell, Wellwood, of Kirkeman, Dalbeattie.
 3d Feby., 1882—Maxwell, James, Bank House, Maxwelltown.
 5th July, 1884—Maxwell, F., of Gribton, Dumfries.
 2d Feby., 1883—Milligan, John, Friars' Vennel, Dumfries.
 4th Nov., 1887—Milligan, Miss, Irish Street, do.
 5th Nov., 1885—Macdonald, J. R. C. (Solicitor), do.
 4th June, 1887—Mackie, Dr, Thornhill.
 4th June, 1887—Mackie, Mrs, do.
 3d Sept., 1886—Miller, F., Royal Bank, Annan.
 7th Oct., 1887—Moodie, William (Solicitor), Dumfries.
 2d Dec., 1887—Moodie, John A. (Solicitor), do.
 5th June, 1886—Morgan, Miss, Shakespeare Street, Dumfries.
 2d Nov., 1883—Montgomery, J. S., Rosemount Cottage, Maxwelltown.
 2d Nov., 1883—Montgomery, Mrs, do. do.
 6th Oct., 1879—Murdoch, N., Netherlea, Dumfries.
 5th July, 1884—Murray, Robert, 14 George Street, Dumfries.
 6th April, 1883—Murray, Mrs R., do. do.
 2d Feby., 1883—Murray, Miss, Langlands, do.
 2d Oct., 1885—Mounsey, Miss, Thornhill.
 6th June, 1885—Moryson, T. A., Queen's Place, Dumfries.
- 6th Oct., 1879—M'Andrew, James, The Schoolhouse, New-Galloway.
 *MaeDonald, Dr, Castle Street, Dumfries.
 11th Nov., 1881—M'Dowall, William, *Standard Office*, Dumfries.
 4th March, 1887—M'Diarmid, W. R., 8 Palmerston Place, Edinburgh.
 *M'Fadzean, R. W., Inland Revenue Office, Greenock.
- 6th May, 1887—M'Gowan, Thomas (Solicitor), Dumfries.
 4th Jany., 1884—M'Gowan, Mrs J. H., Ellangowan, do.
 4th Jany., 1884—M'Kenzie, Mrs, 3½ Queen's Place, do.
 5th Jany., 1883—M'Kinnon, Rev. J. D., South Free Manse, Dumfries.
 *M'Lean, J. C., High Street, Dumfries.
- 5th Feby., 1886—M'Ketterick, T. C., Viewfield, Dumfries.
 5th Feby., 1886—M'Innes, Miles, Parochial Board Office, Dumfries.
 7th Jany., 1887—M'Farlan, Rev. James, Ruthwell Manse.
 4th April, 1881—M'Kie, J., Anchorlee, Kirkeudbright.
 6th May, 1882—M'Kenzie, J. C., St. Cuthbert's, Kirkeudbright.
- 4th March, 1879—Neilson, J., The Academy, Dumfries.
 7th Nov., 1879—Newbigging, John, Kirkbank, Dumfries.
 *Nicholson, J. H., Glasgow Street, Maxwelltown.
- 2d March, 1883—Oughton, R., Castle Street, Dumfries.
 2d Oct., 1885—Oswald, Rev. J. H., Morton Manse, Thornhill.
- 5th Nov., 1885—Paterson, James, Killniess, Moniaive, Thornhill.
 4th April, 1884—Patterson, J., St. Mungo Schoolhouse, Lockerbie.
 5th Nov., 1885—Phyn, C. S. (Procurator-Fiscal), Dumfries.
- 4th Feby., 1887—Rannie, D. W., of Conheath, Dumfries.
 5th May, 1884—Rae, Joseph, Templand Schoolhouse, Lockerbie.
 *Reid, John, Greystone, Dumfries.
- 2d March, 1883—Reid, Miss A., do. do.
 2d March, 1883—Reid, Miss M., do. do.
 6th Jany., 1882—Reid, F., St. Catherine's, Dumfries.
 5th Feby., 1886—Robertson, Dr J. M., Penpont, Thornhill.
 5th Feby., 1886—Robson, Robert, Penpont Schoolhouse, Thornhill.
 4th Jany., 1878—Robb, G. H., The Academy, Dumfries.
 3d Nov., 1882—Robb, Miss, 24 Castle Street, Dumfries.
 3d Nov., 1882—Robb, Miss M., do. do.
 12th April, 1882—Roddan, A., Church Creseent, do.
 *Rutherford, J., of Jardington, do.
- 7th Feby., 1879—Rutherford, John, Pleasance, Kirkmiehael.
 4th July, 1883—Rutherford, Dr J., Crichton Royal Institution, Dumfries.

- 5th May, 1883—Sawyer, Henry, Episcopal School, Dumfries.
 4th March, 1887—Scott-Elliot, G. F., of Newton, do.
 6th Aug., 1887—Scott, Rev. J. H., Sanquhar.
 7th Oct., 1881—Sciffert, C., Midstceple Buildings, Dumfries.
 *Shaw, James, Tynron Schoolhouse, Thornhill.
 4th April, 1879—Shortridge, ex-Provost, Beechwood Bank, Dumfries.
 6th Oct., 1879—Smith, James, Commercial Bank, Dumfries.
 4th Feby., 1887—Stafford, James, Mouswald, Ruthwell.
 2d March, 1877—Starke, J. Gibson Hamilton, of Troqueer Holm, Dumfries.
 1st April, 1887—Starke, Mrs, do. do.
 6th June, 1885—Stewart, Miss, The Academy, Dumfries.
 *Stobie, P., Queen's Place, do.
 11th Nov., 1881—Symington, J., Whimnyhill, Troqueer, Dumfries.
 5th Nov., 1885—Symons, John (Solicitor), Dumfries.
 2d Feby., 1883—Symons, J., Royal Bank, do.
 1st Dec., 1882—Tait, W., Church Crescent, Dumfries.
 5th April, 1878—Thompson, A., Rosemount Terrace, Maxwelltown.
 3d Feby., 1888—Thompson, Mrs, do. do.
 2d April, 1886—Thompson, Miss, do. do.
 *Thomson, J. S., 75 Plainstones, Dumfries.
 *Thomson, Dr, Dumfries.
 2d Oct., 1885—Thomson, George (Solicitor), Dumfries.
 7th Dec., 1883—Thomson, J., Midtown, Carlaverock.
 5th Nov., 1886—Turner, James, Greylands, Dumfries.
 2d Feby., 1883—Tweddle, W., Parkview, do.
 1st April, 1887—Waddell, J. B., Loreburn Street School, Dumfries.
 3d Oct., 1884—Wallace, M. G., Terreglestown, Dumfries.
 5th Nov., 1885—Wallace, J. R., Auchenbrack, Tynron, Thornhill.
 4th June, 1887—Walls, William, Bridge Street, Dumfries.
 9th Jany., 1880—Watson, T., *Standard Office*, do.
 7th March, 1879—Watt, James, Milnwood, Maxwelltown.
 6th Oct., 1879—Weir, Rev. R. W., Greyfriars' Manse, Dumfries.
 6th Oct., 1879—Welsh, J., Waterloo Place, Dumfries.
 5th Nov., 1885—Whitelaw, J. W., Royal Bank, Dumfries.
 2d March, 1877—Williamson, J., Geddes Place, Maxwelltown.
 23d April, 1880—Wilson, J., 3 Norfolk Terrace, Dumfries.
 3d Nov., 1882—Wilson, Mrs J., do. do.
 2d Oct., 1885—Wilson, J. R., Royal Bank, Sanquhar.
 2d Mar., 1888—Wright, W. M., Charwood, Dumfries.

HONORARY MEMBERS.

- Bennett, Arthur, F.L.S., 90 High Street, Croydon.
 Black, G. F., Ph. D., Antiquarian Museum, Edinburgh.
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 Carruthers, W., F.R.S., F.L.S., &c., British Museum (Cromwell Road).
 Dairon, James, F.G.S., 6 Garden Street, Glasgow.
 Gill, Dr, Battershell, 9 Cambridge Terrace, Regents Park, London.
 Gray, Peter, 47 Brailsford Road, Tulse Hill, London.
 Grant, Dr J., *Bey*, The Sandovian, Cairo.
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 McMeekan, J., Hobart Town, Tasmania.
 Robertson, Wm. K., 13 Pitt Street, Edinburgh.
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 Starforth, J. (Architect), Edinburgh.
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 Thomson, Joseph, F.R.S., Gatlawbridge, Thornhill.
 Turner, R., 3 Westbank Place, Hillhead, Glasgow.



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THE TRANSACTIONS
AND
JOURNAL OF PROCEEDINGS
OF THE
DUMFRIESSHIRE & GALLOWAY
Natural History & Antiquarian Society.

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Nothing is so productive of elevation of mind as to examine methodically and truly every object which is presented to thee in life and always to look at things so as to see at the same time what kind of universe this is, and what kind of use everything performs in it, and what value everything has with reference to the whole, and what with reference to man who is a citizen of the highest city, of which all other cities are like families; what each thing is, and of what it is composed, and how long it is the nature of this thing to endure which now makes an impression on me, and what virtue I have need of with respect to it, such as gentleness, manliness, truth, fidelity, simplicity, contentment, and the rest. Wherefore on every occasion a man should say—"This comes from God."—*The Emperor Marcus Aurelius Antoninus (III. 11).*

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JAMES WATT.

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R U L E S .

1. The Society shall be called the "DUMFRIESSHIRE AND GALLOWAY NATURAL HISTORY AND ANTIQUARIAN SOCIETY."

2. The aims of the Society shall be to secure a more frequent interchange of thought and opinion among those who devote themselves to the study of Natural History, Archæology, and Kindred Subjects; and to elicit and diffuse a taste for these studies.

3. The Society shall consist of Ordinary and Honorary Members. The Ordinary Members shall be persons residing in either Dumfriesshire or Galloway, proposed and elected at any Meeting of the Society by a vote of the majority present. The Honorary Members shall be persons distinguished for attainments connected with the objects of the Society, and elected as Ordinary Members, but on the recommendation of the Council.

4. Ordinary Members shall on election pay the sum of 2s 6d entry fee (ladies excepted), and contribute annually 5s in advance, or such other sum as may be agreed upon at the Annual Meeting. When more than one person from the same family joins the Society all after the first shall pay half-fee, and the maximum amount from any one family shall not exceed 10s. By making a single payment of £2 2s they become Members for Life.

5. The Office-bearers of the Society shall consist of a President, four Vice-Presidents, Secretary, Treasurer, Librarian, Curator of Museum, and Curator of Herbarium, who, together with Ten other Members, shall constitute the Council, holding office for One Year only, but being eligible for re-election. Three to form a quorum.

6. The WINTER MEETINGS of the Society shall be held on the FIRST FRIDAY of each month, beginning with October and ending with May, at which papers will be read and discussed, objects of interest exhibited, and other business transacted.

7. The FIELD MEETINGS shall be held on the FIRST SATURDAY of each month, beginning with June and ending with September, to visit and examine places of interest, and otherwise carry out the aims of the Society. Arrangements for these Meetings shall as far as possible be made at the April Meeting.

8. The ANNUAL MEETING shall be held on the FIRST FRIDAY of OCTOBER, at which the Office-bearers and other Members of Council shall be elected, Reports (general and financial) submitted, and other business transacted.

9. A Member may introduce a friend to any Meeting of the Society—such friend not to be admitted more than twice during the Session.

10. The Secretary shall keep a Minute Book of the Society's Proceedings, and a Register of Members, and shall give in a Report at the Annual Meeting.

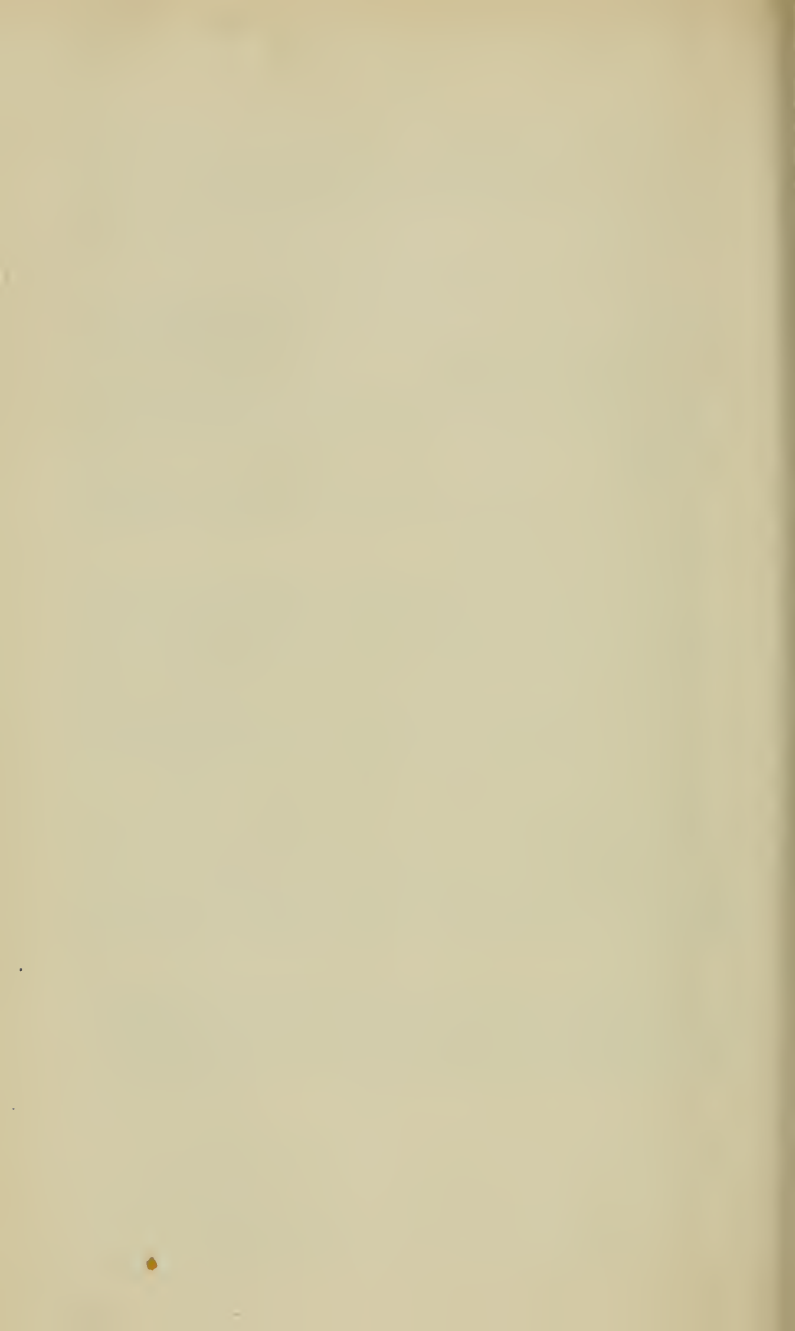
11. The Treasurer shall collect the subscriptions, take charge of the funds, and make payments therefrom under the direction of the Council, to whom he shall present an Annual Account, to be audited for submission at the Annual Meeting.

12. The Secretary shall at any time call a Special Meeting of the Society on receiving the instructions of the Council, or a requisition signed by Six Members.

13. The Society shall have the right to publish in whole or in part any paper read before it.

14. Members whose subscriptions are in arrears for nine months, and have received notice from the Treasurer, cease to be Members unless satisfactory reasons for non-payment be given to the Council.

15. Alterations of any Rule, or the addition of New Rules, shall only be made with the consent of three-fourths of the Members present at any meeting, notice of the same having been given at the previous Monthly Meeting.



PROCEEDINGS AND TRANSACTIONS

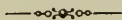
OF THE

DUMFRIESSHIRE AND GALLOWAY

Natural History and Antiquarian Society.



SESSION 1887-88.



7th October, 1887.

ANNUAL MEETING.

Mr JAMES G. H. STARKE, M.A., Vice-President, in the Chair.

Twenty-six members present.

New Member.—Mr William Moodie, Solicitor.

Donations.—A section of the rock obtained from the sinking of the Artesian Well at Troqueer Mills, from Mr W. A. F. Coup-land ; two specimens of native ore—silver and copper—and a large barnacle, from Dr Bruce of Castle Dykes ; a stone whorl found at Canonbie, from Mr William M'Dowall ; a MS. copy of the Minute Book of the Trades Incorporation of the date 1601, from Mrs Pearce ; the 6th Annual Report of the Bureau of Ethnology (United States) ; the Annual Report of the Smithsonian Institution, 1885 ; three Annual Reports of the Elisha Mitchell Society ; the Transactions of the Glasgow Natural History Society, the Belfast Naturalists' Society, the New York Academy of Sciences ; the Annual Report of the British Association, 1886 ; nine parts of the Journal of the Linnean Society, from Mr Robinson-Douglas ; and eight volumes of the Proceedings of the Society of Antiquaries, for which the Committee had exchanged Ethnological specimens from New Zealand.

SECRETARY'S ANNUAL REPORT FOR SESSION 1886-87.

The Secretary (Mr Wilson) read the Annual Report, which was as follows : In presenting the Annual Report for the Session which has now drawn to a close, I have much pleasure in stating that the past year has been the most successful in this Society's existence, and that in it the Society has increased in membership and considerably extended its usefulness, as the various details which I now briefly submit will shew.

At the last annual meeting our membership numbered 213, comprising 5 life, 187 ordinary, and 21 honorary members. During the session 24 ordinary members have been enrolled, and 1 ordinary member has been transferred to the list of life members ; but 14 names have been taken off the roll, 2 members having died and 12 either removed from the district or resigned. Now the total number of members is 223, which is 10 more than last session, and includes 6 life, 197 ordinary, and 20 honorary members.

During the session the usual 7 winter meetings and 5 summer meetings were held, also 2 special meetings devoted to lectures by members.

All the winter meetings were fully occupied, and 15 communications by different members were read and discussed, this being the same number as in last session. Several of these papers are of great local interest, and the majority treat of subjects immediately within the scope of the Society and for which the writers again deserve commendation. Special reference may, I think, be made to the papers by Mr Hastings on "Ornithological Notes," Dr Davidson on his "Additions to the Flora," Rev. W. Andson on "Meteorological Notes," Mr J. C. Aitken on "The Bridge of Nith," Mr Arnistead on his observations of "Atmospheric and other Influences on the Migration of Fishes," Mr Coles on his explorations among the "Archaic Sculpturings and Ring Markings," and to Mr J. Wilson on "The Cinerary Urn found at Greystone."

The exhibition of specimens and objects of local interest at the meetings was an additional source of information and pleasure, and special reference may also be made to the unique articles kindly lent by Mr R. M. Witham of Kirkeconnell.

The five field meetings were held in the neighbourhood of Dumfries, Dalbeattie, Moffat, Sanquhar, and Kirkcubright, so

that members who live in different parts of Dumfriesshire and Galloway had the opportunity of attending one or more of them, and the Society had the pleasure of carrying on its investigations in different directions. With regard to the field meetings some good work has been done, but there is yet room for improvement, for the entomological department does not receive the attention it deserves, except by one member—Mr Lennon. The members are to be complimented for their endeavours in preventing the extirpation of the rarer flowering plants and ferns as well as for recording the lists of "finds." The kindness and hospitality the Society received from Mr J. Gillon-Fergusson of Isle, Mr W. D. Robinson-Douglas of Orchardton, Mr J. R. Wilson, of Sanquhar, and Mr Hamilton, Kirkcudbright, deserve special mention.

The excursion to Moffat in July was again held as a joint excursion with the Scottish Natural History Club, Edinburgh, when the two Societies renewed their acquaintance and were rewarded by the finding of *Rubus Leesii* (Bab.), a plant not hitherto recorded for Scotland.

The average attendance at the winter meetings was 34 and at the summer meetings 27.6, the former being larger than last session, but the latter slightly under and no doubt due to the unfavourable weather for the June and September excursions.

There were 15 committee meetings, all of which were fairly well attended.

In January last a sub-committee was appointed to memorialise the Town Council of Dumfries in reference to the converting of the basement of the Midsteeple into a shop. The Town Council did not acquiesce in the petition, but carried out their plans and materially altered the stability and security of that historic building.

This Society approved of the action taken by the Rev. J. McFarlan and the Heritors of Ruthwell in protecting the Runic Cross from the detrimental agencies of the weather and exposure, and contributed towards the expense.

The donation of specimens to the Society's collection has been progressing favourably, and those chiefly added were geological and botanical.

The Society purchased two additional maps of Pont's series, and now possesses the parts for Dumfriesshire and Galloway.

The additions to the Library have been both numerous and important, and special mention should be made of Mr Robinson-

Douglas's donation of the "Journal of the Linnean Society" to date, the valuable volumes we receive through the Smithsonian agency, and the Annual Report of the British Association for 1886.

In addition to the ordinary business of the session, your committee decided upon holding a *conversazione* in Greyfriars' Hall on October 27, 28, and 29, and the success which this undertaking met with was beyond the most sanguine expectations. The objects sent in for exhibition were so numerous that the committee restricted the exhibits to those only of the archæology and natural history of the district, and even then the exhibition hall was well filled.

This *conversazione* has already been the subject of a special report to the Society, and it is sufficient to mention here that not a single article lent for the occasion was lost, that all the visitors were well pleased with the display, and that the balance in the Treasurer's hands was increased by more than £5 12s. However, for further information on this subject I beg to refer you to the preceding part of this Society's Transactions, as the appendix contains a brief description of the more important exhibits and other necessary details.

On the motion of Mr Starke, Mr Wilson was thanked for his services during the past session.

ELECTION OF OFFICE-BEARERS.

The following Office-Bearers for the ensuing session were elected :—President, Dr Thomas B. Grierson ; Vice-Presidents, Major Herbert Bowden, Messrs F. R. Coles, W. J. Maxwell of Terregles Banks, and R. Murray ; Hon. Secretary, Mr Joseph Wilson ; Assistant Secretary, Mr R. Barbour ; Hon. Treasurer, Mr James S. Thomson ; Members of Committee, Messrs James Barbour, A. Bruce, J. Davidson, A. Innes, T. Laing, J. Lennox, J. Neilson, T. Shortridge, J. G. H. Starke, T. Watson.

4th of November.

Mr JAMES BARBOUR, Architect, in the Chair. Thirty members present.

New Members.—Mr James Barbour, Junior, and Miss Milligan.

The Rev. William Andson was elected a Member of the Committee in place of Mr Alex. Bruce, deceased.

Donations.—Transactions of the Edinburgh Geological Society and of the Epping Forest Field Club.

Mr James Lennox submitted the audited balance-sheet for the preceding Session, which was unanimously adopted, and the Treasurer was thanked for his honorary services.

COMMUNICATIONS.

I. *A Note on the Roman Camp at Springfield Hill, Dunscore.* By
J. CALLANDER, M.D.

The height on Springfield Hill Farm, Dunscore, on which the Roman Camp is situated, is nearly oblong in shape. Its longer diameter, roughly speaking, runs nearly from east to west. On its north, west, and south sides it is separated from surrounding heights by wide and deep hollows. On its east side it is joined by a narrow sloping neck of land to the cultivated fields which trend away to the level holms far below. The surface of its summit is level, and measures about five thousand square yards. It is distant about two hundred yards from the public road leading over the hill from Dunscore Village to Dunscore Old Churchyard, and about the same distance from Springfield Hill farm house. It was for a cantonment in time of peace, and as a post of observation, we believe, that the Camp on Springfield Hill was constructed about the year A.D. 82. It marks not a position taken up by an army on active service in the field, but a permanent station held by a small force in time of peace. Several facts may be mentioned which appear to give support to this theory. The Camp is situated near to the line of a Roman road, which ran from the south-east in the direction of the north-west, some vestiges of which were discovered and removed a few years ago. It is far too small to have afforded accommodation to any considerable force. If a Roman army of twenty thousand men required an area of four hundred and ninety thousand square yards on which to construct its camp, as we know it did, the Springfield Hill Camp, with its available area of five thousand square yards, could only have accommodated a detachment of from two hundred to two hundred and twenty men. Water must have been brought from some distance to Springfield Hill. A small force in the field would never have entrenched itself in a position where an active and determined foe could easily have cut it off from its water supply. The Camp is not fortified in the manner in which a Roman army

on active service entrenched its camp. When a Roman army was in the field, and halted even for a single night, the unvarying practice was to throw up an entrenchment in the form of a square, large enough to contain the whole army with its baggage. The defences consisted of a ditch twelve feet deep and twelve feet wide. The soil dug out was thrown inward so as to form a rampart twelve feet high all round. On the summit of the rampart was a palisade formed of sharp wooden stakes. In the Springfield Hill Camp this style of circumvallation is departed from. On the east, a ditch, *fossa*, gently curved, stretches along the whole side. This ditch is backed by a rampart, *agger*, also curved, about fifty-eight yards in length. Immediately behind this first rampart is a second ditch, and on its inner edge rises a second rampart about sixty-three yards in length. This second ditch and rampart, with an interval at the north-east corner of the Camp for the entrance, *porta*, are carried round the whole length of the northern and western sides. A single ditch and rampart, with the deep declination of the ground beyond, appear, in the opinion of the garrison, to have afforded sufficient protection to the Camp on these two sides. Behind that part of the second rampart which defends the eastern side of the Camp is a platform, nine yards broad at its widest part. On this platform fifty men could be drawn up in order of battle, according to the Roman method. Behind this platform, and also running the whole length of the eastern side of the Camp, but stopping at the entrance way, is a third ditch backed by its corresponding rampart. From the inclination of the ground this third rampart rises high above and overlooks all the works in front of it. Each one of these ramparts would be surmounted by its palisade, *vallum*, made of sharp wooden stakes, *sudes*. On the southern side the rocks, which stand out bare and jagged and grimly overlook the level ground far below, would form an impassable barrier to any assailant. As a post of observation, the Camp is admirably situated. It overlooks the country to the west, to the north, and to the east for many a league. Constructed about A.D. 82, at the close of Agricola's wars—certainly before A.D. 84, in which year Agricola left the whole of England and the Lowlands of Scotland pacified, in the enjoyment of settled laws and the conveniences of life—it would be occupied till A.D. 120, when the Emperor Hadrian, who visited Britain in person, wearied out by the frequent incursions of the wild Caledonians into the

country south of Agricola's forts, withdrew his garrisons, left the inhabitants of the South of Scotland to their fate, built a wall between the Solway and the Tyne, and made a new boundary to the Roman Empire in Britain. The Springfield Hill Camp, along with the other military stations, would be evacuated at this time and left for nineteen years to ruin and decay. In the year A.D. 139 Lollius Urbicus, under Antoninus Pius, rolled back the tide of barbarian invasion which had swept over the Lowlands of Scotland, repressed the lawlessness and anarchy which prevailed, built a wall in the line of Agricola's forts, and re-established the Roman authority in the land as it had existed nearly sixty years before. The likelihood is that our Camp was restored and re-occupied because it was required for the same purposes for which it had been constructed in the days of Agricola, and that the occupation continued till A.D. 210, when the Emperor Severus rebuilt Hadrian's wall and again made it the northern boundary of the Roman province. The legionaries, recalled, marched from Springfield Hill never more to return for any length of time. It is true that, in the year A.D. 368, in the reign of Valentinian, the country between the two walls was re-conquered by Theodosius, the Roman governor of Britain; but as the Empire had at this time entered on its decline, it is very improbable he retained possession of his conquest for any length of time. The Romans finally abandoned Britain about A.D. 448.

This discussion shews, then, that in all probability the Camp on Springfield Hill was constructed about A.D. 82 as a military post of observation, that it was occupied as such till A.D. 120, that it was abandoned for nineteen years, that it was re-occupied in A.D. 139 and maintained till A.D. 210, when it was finally and for ever abandoned.

II. *Natural History Notes for 1887.* By Mr WM. HASTINGS.

There is little to note this year in reference to anything unusual among our native birds so far as I have seen. There has been a great scarcity of the cuckoo this year compared with the two last seasons. I have had only one specimen this year, whereas I used to have a good many both old and young birds. In the Spring I received a nice specimen of a pure white starling. I have had the starling peculiarly marked, but never before saw one pure white. In the month of May I received a fine specimen of the golden eagle (male bird), trapped in Argyleshire, where in

that shire and in Inverness-shire there are still a few pairs scattered throughout the country. I lately received a pair of crossbills shot upon the Shambellie estate. The crossbill is a very uncertain visitant to this country, many years elapsing and not one being seen or heard. However, when they do come, there are often a few pairs remain with us to breed and rear their young. Their nests with young birds have been taken in Dalswinton Big Wood, and I have had them from Baehills and seen them in Closeburn the whole season through. Their native home is in the pine forests of the Baltic, where they feed upon the seeds of the larch and Scotch fir. Their remarkably formed bill and powerful muscles of the neck are beautifully adapted for wrenching open the imbricated scales of the fir cones, so that they may get at the seeds. The hooded crow (*Corvus Cornix*) seems to be plentiful here this winter, as I have received several specimens from different parts of the country. They are plentiful upon the Argyleshire coast, feeding upon any garbage that the sea may cast up, upon crabs—in fact, upon anything that offers them a meal. They are very destructive of the eggs and young birds of almost every species that they meet with throughout the country. They are ascertained to breed with the common carrion crow, and I have myself seen a decided hybrid betwixt the two. In the month of July I was down on the Colvend coast, and I saw a small flock of birds that I had never seen before in life and could not make out what they were, and regretted that I had not a gun with me. A few days after I received one of the same kind of birds, which turned out to be the greenshank, which is rarely met with in this district. Not long after I had another sent me, shot upon the Annan Water, as far up as Dalffibble. I have not had above two or three specimens of the same bird for more than thirty years. This autumn I had a specimen of the solan goose or gannet brought me in a very peculiar dress. The gannet is a large white bird, with the points of the wings black. This one was dark brown and beautifully marked with round white spots, which gave it a very unusual appearance. About a month ago I received a specimen of the little stint, shot at Southernness. The little stint in its general appearance is very like the dunlin or sea mouse, only it is a full third smaller and very seldom met with upon our shores. In the month of April last I received a fine specimen of the female badger, trapped in Dalswinton Big Wood, the only one I have ever had killed in the district. In the month of

September last I received from Newton-Stewart a specimen of a shark called the Porbeagle Shark. It was 9 feet in length and weighed about 400 lbs. It is described as being rare, or at least very seldom seen upon our shores. This one was caught in Lochryan, having got entangled in some fishermen's nets, and was with difficulty brought to land. It has three rows of very sharp teeth in the upper as well as in the under jaw, and is said to be very voracious, having been known to attack men in a small boat and tear their clothes off their backs. It lives upon other fishes, and will have no difficulty in swallowing a fish two feet long at a mouthful. It was not a very agreeable subject to handle.

III. *Folk Lore in Tynron.* By Mr JAMES SHAW.

An old farmer who died three years ago in Tynron related to me his experience with a witch in Closeburn when he was a boy. He was carting freestones from a neighbouring quarry, when his horse came to a standstill opposite the witch's door. Two other carters passed him, and only jeered both at the witch and the boy, when the former, to whom he had always been civil, came forward and with a slight push adjusted the ponderous stone which had slipped and was stopping the wheel. "Now, go," she said, "thou wilt find them at the gate below Gilchristland." At that very spot he found the perplexed carters standing, both horses trembling and sweating, so that he easily went past them and got to his goal first. The same individual could name a person at whose glance the milk being drawn from the udders of the cows became blood, while his sister was milking them. I have observed horse-shoes nailed up against his stable wall to scare away uncanny influence. A dairywoman who resided beside me about fifteen years ago informed me that when young she had resided in Kirkconnel, Tynron, and that the house was haunted. At night strange faces peered in at the window, and eldritch laughter was heard. Her father once saw a red figure at dusk on the ledge of the bridge, near the house, which appeared of human shape, but disappeared as he approached. He also on one occasion saw my informant's sweetheart on the road coming to see her, although at the time he was several miles off. A housekeeper I had, who died a few years ago, assured me that, while she was a servant with a medical man in Moniaive, strange foot-falls were frequently heard in an upper room. The doctor, after a while, suddenly took ill, lay down on a sofa and died, over the very spot on the floor where these alarming

foot-falls had been most frequently heard. A young man who had been attending classes in Edinburgh came home, and one evening when I was in his father's house set off a balloon after sunset. The candle in it set the whole tissue on fire while it was soaring above our heads. A shepherd whom I knew, seeing the light from a distance, rushed in a state of great agitation into a neighbouring cottage, which he happened to be near, and brought out the good-man of the house. Both thought that it must have been *the light which is seen before death*; but the mistress of the house rather soothed them by remarking that such a light could not be seen by two at once. An old woman informed me that she had witnessed this premonitory light, which lighted up the interior of the byre while she was engaged milking her cows, and she learned that her mother, residing some miles distant, had expired that same evening. Readers will recollect the fateful light in Sir Walter Scott's ballad of lovely Rosabelle. James Hogg, the Ettrick Shepherd, refers to an omen called the "death bell," a tingling in the ears, which is believed to announce a friend's death. As the "light before death" could not be seen by two at once, so the death-bell could only be heard by one at the same time. The relations of a gentleman residing in Tynron have been warned of death by the sound of wheels upon the gravel walk leading to the door, when no wheels were there, and to a family in Durisdeer the warning came like a switch against the panes of the window. The old precentor of Glencairn, who died six or seven years ago, told me that while walking one moonlit evening in his garden in a meditative mood he heard a sound, as if a cart containing pieces of metal had been tilted up and the materials discharged. His belief was that a murdered infant had been buried in that garden. These murdered innocents were frequently heard wailing about forty years ago in the corn and in the thickets around Maqueston in Tynron. A gentleman of suspected morality had occupied this house early in the century. So troublesome were these sounds that the new tenant had for a while great difficulty in retaining servants. A white lady has been observed hovering by moonlight over the little cascade in the Shinnel which forms Paul's Pool. In "Bennett's Tales of Nithsdale" mention is made of the custom of placing a wooden platter with salt, or more correctly salt and earth—for a turf was cut and put above the platter—on the breast of a corpse. There is a reminiscence of this in our parish, and the reason given for the custom was that it prevented the corpse from

swelling. In Thiselton Dyer's "Folk Lore," and Napier's "Folk Lore of the West of Scotland," the custom is referred to. The plate of salt was intended for the sin-eaters, who came and devoured the contents with incantations, and thus relieved the spirits clogged with earthly frailties, and kept them from hovering too closely near their friends and relatives. Pennant mentions the custom, suggesting that the salt was an emblem of the incorruptible spirit and the earth of the body. When the sin-eater arrived, Napier mentions two plates—one of salt and one of bread—which required to be devoured. A shepherd in Tynron told me that he recollected seeing perforated stones, or stones nearly perforated, from the channel of the stream, attached to a rowan tree near a house at the head of the Kinnel, and that he understood both stones and rowan tree were looked upon as likely to scare away evil influences. At or near Fleuchlarg, in the adjoining parish of Glencairn, might have been seen a hole in the wall of the byre, letting out a rope, so that if the evil spirits got in they could get out more readily by the hole. I understand that when I was carried to church for baptism, the young woman who carried me bore a piece of bread and cheese in her pocket, presenting it to the first person she met, who was expected to bless me. Baptism being private in Tynron, I have nothing of this kind to record. The beggars' benison, however, was of such esteem in the eyes of an old woman in Tynron that it secured a night's lodging for many a tramp. Silver is lucky. A father gave a lucky shilling to his daughter at her marriage. Crooked sixpences are worn at the watch chain, so that you may have silver when you first see the new moon. Turn your apron three times and look at the new moon, wishing for a present, and a present will arrive to you ere it wane away. One person, trying the experiment, received in a present a pair of curtains, a dozen eggs, and a hen. If you see the plough coming towards you for the first time of the new year, it augurs well, but if you observe it going away it is unlucky. It bodes ill to turn when you are setting out on a journey. It is better for you should the day be a wet one. Great care should be taken not to burn hair or nails. It is unlucky to pare your nails on Sunday, but if you pare them on Saturday, expect to see your sweetheart to-morrow. Tuesday and Friday evenings are the orthodox evenings for courting, but it is not well to marry either on Thursday or Saturday, while most Scotch marriages are performed on Friday. Mr Mc'Caw, our

shepherd-author, told me that when he was young many persons in contributing to a raffle wrote against their subscription the word "Friday," expecting thereby better luck from the dice. It is not well to change situations on Saturday. "Saturday's enter is a short resider." I quote the following rhyme from a native of the district :

" *Gang* and see the swallow flee,
Sit and hear the gowk,
 The foal before its minnie's e'e,
 And all that year ye've luck."

If a hare cross your path to the left it is of evil omen, but not if it cross to the right. If a person eats the brains of a hare he will be ill-tempered afterwards. This Tynron saying is something like La Fontaine's estimate of the hare, whose flesh produced melancholy. In Swift's "Polite Conversation" hare-flesh is called "melancholy meat."

" The robin and the wren are at God's right hand,
 The yeldrock and the sparrow are the Devil's bow-and-arrow."
 " The robin and the wren made their porridge in a pan,
 Ere the robin got a spoon, the wren had them all done."

A dairyman once asked me for the scientific name of the "worm that first breaks through the coffin lid." He also informed me that the bat and dormouse and the hedgehog were three of the seven sleepers. To rub shoulders with a bride or bridegroom augurs a speedy marriage. If a girl eat a herring before going to bed she has a chance to dream of her sweetheart. A rainy wedding-day goes with a greeting bride. It is the correct thing to dance in stocking soles at the marriage of a sister or brother younger than yourself, the sister at the sister's, the brother at the brother's. It bodes not well to make a present to your sweetheart of a knife or other sharp article, lest it should cut love. It was a custom at Hallowe'en to wind a clue in a kiln-pot with the expectation that your future partner in life might be seen holding the other end of it. Should a girl scoop a hole where three or more roads meet and apply her ear to it, she may hear a whisper telling her the trade of her future lover. If your palm tickle it is a sign that you shall soon shake hands with the rich or obtain money. Sitting down to meat causes the invited guests to arrive. The tongs falling head foremost into the ash-pit is a sign that a stranger is coming. An itching palm is a sign of change of weather. If your right ear be warm or tingle it is a sign that

somebody is praising, but if the left you are being reviled. A curly head is the sign of a quiet temper. The hair of the eyebrows meeting above the nose signifies unsteadiness and love of change. The howling of a dog at night is indicative of death. The burning of withered grass on the moors in spring "cankers the air and brings on rain." The clothes of dead men don't last long. A whistling woman and a crowing hen are uncanny. An excellent cure for warts is to rub them in the morning with your fasting spittle. It is unlucky to turn either horse or vehicle widdershins—that is, against the sun. It is dangerous for future welfare to pour out any liquid turning your hand backwards. When a candle runs—that is, when a shaving descends down its stalk—look soon for the coffin of a friend. If a window blind fall of its own accord, it is unlucky. Bees leaving a hive full of honey is a bad omen. Bees are encouraged to settle when swarming by loud noises and rattling of instruments. It is unlucky to spill salt at table or to help another to it. Cast some salt over your left shoulder and your mistake will be rectified. To drop your umbrella or walking-stick shows that your mind is likely to give way. The cuckoo remains until it gets an awn of barley into its throat. Thirteen at table is unlucky—he who rises first runs most risk; better, in such a dilemma, all to rise at once. To dream of a wedding signifies a corpse. The grandfather of a lady in Tynron dreamed he was at a ball with his sister, who looked well, and was in a white dress. She went out, saying to him, "You will not be long in following me." She died in a short time, and he died soon afterwards. If you dream on Sunday morning, you shall have a letter within a week. One instance has reached me of a person seeing another sitting in a chair when the person thus seen was not at all in the room. Brewster accounts for similar visions by a diseased condition of the retina. Swallows building in your eaves is lucky. Crickets leaving the house is a sign of death. The culm which accumulates on the bars of a grate foretells a visitor. The bright spark often seen on a candle declares, if it falls, a letter is posted to you; but if it sticks to the side of the candle, it denotes that it is only on the way to be posted. Such are the greater part of my gleanings of folk lore in Tynron and the neighbourhood. I fear there is not much new in it; but it may give you an idea of the residuum of belief which still lingers on from the time which some people have named "The Ages of Faith."

2nd of December.

Major BOWDEN, Vice-President in the chair. Twenty-six members present.

New Member.—Mr John A. Moodie, Solicitor.

Donations.—Mr Robert Thomson, Joiner, presented, through Mr James Barbour, the dove carved in wood and gilt which formerly stood over the canopy of the New Church, Dumfries (Greyfriars'). When that church was taken down the dove was purchased by the late Rev. Dr M'Farlane and placed by him over his pulpit in Troqueer Church, which has lately been rebuilt. This interesting relic came into the possession of the contractor, Mr Thomson. Mr James M'Andrew presented *Juncus tenuis* and *Rhynchospora fusca* found by him in the district and now first recorded. Fifteen new rules were adopted, on the motion of Mr J. Wilson, the Secretary.

COMMUNICATIONS.

I. *Certain Common Parasitic Fungi.* By Mr GEORGE F. SCOTTELLIOT, M.A., F.L.S.

The fungus (*Peronospora infestans*) that causes the well-known potato disease consists of a delicate series of branching filaments that penetrate between the cells of the potato leaf and suck from them the materials that should feed it. By this procedure the potato leaf decays, and this causes the unpleasant odour that is one of the signs of the disease. The fungus is enabled to spread from one potato plant to another by means of conidiospores. These are formed on the under surface of the leaf (giving rise to a sort of whitish bloom) on the extremities of a branched filament which is protruded through a stoma. The conidiospores are blown by the wind on to the upper surface of a potato leaf, or in some cases on an exposed tuber. If the weather happens to be wet, the conidiospores break up into 7 or 8 little "swarm spores," and these penetrate (in the case of the leaf) through the cuticle, and by germination produce a new series of filaments in it. (In the case of the tuber, the fungus makes its entrance by the "eye.") Towards the end of the autumn the fungus makes its way down the stalk to the tubers, and passes the winter in a latent condition in them. When the tuber germinates in spring the fungus grows, keeping pace with the growth of the young plant, which is thus doomed from its earliest days. A special kind of

spore (*Oospore*) with a hard coat, is also formed by the fungus inside the leaves and stalks. These are set free by the decay of the leaves and stalks, and in the spring germinate and infect new plants. This being the life-history of the fungus, the remedies found to be of service are easily explained. First, it is obviously necessary to destroy, by burning, all dead or decaying remains. Secondly, "earthing up" the tubers prevents their being infected by the conidiospores. Thirdly, a remedy which has been found thoroughly satisfactory in the case of the American grape vine mildew, also caused by a *Peronospora*, consists in sprinkling the leaves with a mixture of 8 kilogrammes of copper sulphate, 16 kilogrammes of chalk in about 130 litres of water. This need only be sprinkled on the leaves once for all, and a broom dipped in buckets of the liquid is found to be the most convenient method. It is extremely probable that this would prevent the spread of the potato disease, as the mixture prevents the conidiospores from forming swarm spores, and so infecting the leaf. The same remedy might also be used for the onion mildew, which is due to another *Peronospora*, *P. Schleideniana*, and a trial is highly desirable.

II. *A Strange Atmospheric Appearance.* By Mr ROBERT ROBSON,
Penpont.

On the evening of one of those splendid summer days in the middle of July last, half-an-hour before sunset, a party of five of us, a lady and four gentlemen, were standing in front of Penpont Manse admiring the beautiful landscape directly in front of us—a view which embraces the greater portion of Middle Nithsdale. This view is bounded on the east and south-east by the Closeburn hills and on the south and west by the hills of Keir, broken only by the deep gorge at Auldgirth through which the River Nith enters the valley of Lower Nithsdale. Owing to the configuration of the hills and the low elevation of the manse, no view can be possibly obtained of the valley beyond. It was near sunset, and Sol himself seemed to cast one long, lingering look behind, and, as if bestowing his parting blessing, shone forth with special splendour, as he often does before sinking for the night behind the hills of Tynron. One of our number drew the attention of the party to the strange appearance of what at first sight seemed to be the sky towards the south. Another of the party pointed out the vivid outlines of a large field, with a wood to the south of

it, directly in the centre of the gorge already referred to, but on a level with the spur of the Closeburn hills. No such field had ever been observed there before. Then, to our surprise, what we had at first taken to be the reflection of the sun's rays by the clouds appeared to be the whole valley of Lower Nithsdale elevated to the level of the hills and brought within our view, while in the far distance the waters of the Solway were plainly visible. The surface appeared uniform and unbroken by any elevation, while the woods, plantations, and groups of trees shone as dark patches and more prominent than usual. The valley sloped gently upwards on the west, as it does towards the ridge occupied by the parishes of Tinwald, Torthorwald, and Mouswald, &c. The outline of this ridge on the west was somewhat indistinct, and at the sensible horizon merged into the clouds above. The general colour was of a reddish yellow, not unlike cultivated land, and formed a strange contrast to the sky above, which presented a natural appearance, with overhanging clouds in some parts. No houses were visible, nor, with the exception of the one already referred to, could fields be distinguished; but the general contour of the valley, with a clearer outline of the Solway, was distinctly marked. This strange appearance lasted fully twenty minutes, and when the sun went down nothing could be seen but the well-defined outline of hills against the clear sky. On the following day I climbed the Doon, a hill in our neighbourhood over 900 feet high, and from this coign of vantage made minute observations of the landscape in sight. The general outline corresponded exactly to that seen on the evening previous, while I at once recognised, down in the valley, the field and wood that had appeared so vividly in the foreground. The relative positions of the woods and plantations were exactly similar. I may here remark that a correspondent in the *Scotsman* gave a brief account of a similar appearance observed by him about two weeks previous. Such phenomena are rarely seen in this country, and can only be observed by a person in a position such as we were—with his back to the sun. No doubt this phenomenon was simply caused by the refraction of the rays of light from the valley on passing through the denser atmosphere immediately above it.

III. *Notes on the Flora of Wigtownshire.* By Mr JAMES M'ANDREW, New-Galloway.

As an introduction to the following notes on the Flora of Wigtownshire, I shall say a few words descriptive of the county itself. Wigtownshire is rhomboidal in shape, of about 30 miles on each side, and is deeply indented by two large openings of the sea, Loch Ryan and Bay of Luce, thus affording a large extent of varied sea-board in proportion to the size of the county, and also rendering the climate milder and more equable than it would otherwise be. For instance, fuchsias attaining the size of tall shrubs grow luxuriantly in shrubberies through the winter at such places as Logan House.

The usual divisions of the county are the *Machars*, the broad peninsula ending in Burrow Head; the *Moors*, the northern part of the county; and the *Rhins*, or western narrow peninsula. These three divisions are considerably different in character.

At the head of Wigtown Bay, Bay of Luce, and Loch Ryan are extensive tidal sands, and in addition, at the head of Luce Bay, on the western side, are extensive wind-blown hillocks of sand bound together by *Ammophila arenaria*, &c., and on the moor of Genoch, making an excellent rabbit warren. The remainder of the coast line is generally irregular, and in some parts, as near Burrow Head and the Mull, it is rocky and precipitous, while in other parts, as about Port-William, the coast is shingly. Sandy bays occur occasionally, and in these are found the best sea shore plants. No county rises so little above the level of the sea as Wigtown, yet its surface is varied by many heights, which on the Ayrshire border are about 1000 feet high, while those scattered throughout the county are considerably under that elevation. One of the striking features of the county is the great number of fresh water lochs, and another is the wide stretches of marshy, mossy, and boggy ground called "flows." A great extent of the inland part of the Machars, and most of the Moors, is composed of this unprofitable kind of ground, still undrained. The most fertile districts are near the coast, as at Stranraer, Wigtown, Whithorn, Port-William, and the Rhins generally. The most prevalent rock is greywacke or whinstone of the silurian system, and the soil is generally thin, though barley, oats, wheat, beans; &c., are cultivated on the richer ground.

The Flora of Wigtownshire, from a botanical, physical, and territorial point of view, should have been included in that of

Kirkeudbrightshire and Dumfriesshire, but from the paucity of information at the time, it was deemed advisable in the compilation of our local Flora to restrict the list of Wigtownshire plants to a few of the rarer ones, as given in the Appendix. Very strangely, Wigtownshire, as regards its flora, was, until a few years ago, as much a *terra incognita* as some counties of our Western Highlands. The late Professor Balfour of Edinburgh and other botanists paid flying visits to the county and recorded some of its rarer plants, especially those found in the neighbourhood of the Mull of Galloway, some of which, I have heard, were obtained by means of a boat. Such hasty visits lack the true means of knowing the flora of a district, viz., systematic research. Records of Wigtownshire plants are also found in the old Statistical Account of Scotland, in the Herbarium and Transactions of the Edinburgh Botanical Society, in the Transactions of the Philosophical Society of Glasgow, and in similar scattered literature. These records are, however, from 30 to 40 years old, and therefore many formerly recorded plants of "The Shire" require re-discovery. A great number of the Wigtownshire plants given in the Appendix to our local flora were observed by myself during two visits to Port Logan about 10 or 12 years ago. Mr Charles Bailey visited Wigtownshire in 1883, and made a few additions to its list of plants, but it was in 1883 that Mr G. C. Druce, of Oxford, who delights to botanise in out-of-the-way unexplored corners, gave an almost complete list of Wigtownshire plants. In the summer of that year, under the very great disadvantage of a sprained ankle, he botanised for five days the greater part of the county, and notwithstanding his accident and the shortness of the time at his disposal, his list is really astonishing in its completeness. During the past two summers I have personally verified the great majority of the plants in his list. In his list given in the Botanical Record Club Report for 1883, he begins his remarks in the following words: "The accompanying catalogue of Wigtownshire plants fills up the only gap in the counties of Britain for which no lists of common plants has been supplied to Mr H. C. Watson, or to the Record Club." Botanically considered this statement is not creditable to the district. At the end of his list he gives this summary:—

Recorded before	35
Baillie's additions	10
New species recorded	439
Aliens and denizens	33
Varieties	35

Thus it is seen that until 1883 almost nothing was done in the way of making a complete list of Wigtownshire plants. To this list I have added at least 20 species hitherto unrecorded, and these from only two localities, viz., around Portpatrick in 1886, and around Port-William in 1887. Comparatively little now remains to be done as regards the Flora of Wigtownshire except to add a few additional species from time to time, and to note new stations for the rarer ones. Many plants not recorded from our three south-western counties in the Second Edition of Watson's "Topographical Botany" are yet given in our local Flora, which unfortunately was not available when this second edition was issued. As the matter at present stands it is bewildering to ascertain what plants have been recorded from this district and what have not, and therefore to pledge myself to perfect accuracy on this point would be impossible. This will, no doubt, be remedied in the third edition, for which Mr Arthur Bennett is collecting material. The plants new to Wigtownshire in 1886 from Portpatrick are:—*Botrychium lunaria*, *Cakile maritima*, *Raphanus raphanistrum*, *Arenaria trinervis*, *Circæa lutetiana*, *Juniperus communis*, *Cerastium tetrandrum*, *Veronica hederæfolia*, *Leontodon hirtus*, *Euphorbia paralias*; and at Port-William this year I gathered new to Wigtownshire:—*Carex punctata*, *Carex paludosa*, *Sagina apetala*, *Astragalus glycyphyllos*, *Chærophyllum temulentum*, *Lysimachia vulgaris*, *Typha latifolia*, *Scolopendrium vulgare*, *Ammophila arenaria*, and *Blysmus rufus*. Of these the two most interesting plants are *Carex punctata* and *Euphorbia paralias*. This gives another county record for the rare *Carex punctata* for Scotland. It has been found in Scotland before only by the Rev. James Fraser, Colvend, at Glenstocking, in his own parish. I gathered it at Craigs of Garchew, six miles north of Port-William. *Euphorbia paralias* I found last year at Morroch Bay, south of Portpatrick, and this year on the shingle north of Port-William. Hitherto it has been recorded for Scotland only from Fife as an introduced plant.

As the natural features of the two Galloways, East and West, are considerably different in many respects, it would be difficult to say which county has the greater number of flowering plants, but there can be no doubt as to the very marked superiority of Kirkcudbrightshire in the variety and abundance of its cryptogams. As far as present lists go, the Stewartry has also a decided advantage in the number of its planerogams. Wigtownshire has

only the very commonest mosses and other cryptogams, and even its bogs have only a tiresome repetition of the commoner species. However, I would say without contradiction that Wigtownshire, from the character of its shores, has more seaboard plants than Kirkcudbrightshire, while on the other hand it is sadly deficient in alpine and sub-alpine species. Mr Druce says that *Galium boreale* is the only mountain and almost the only northern plant he found, and even this was washed down from the hills by the River Cree. In the rich and cultivated districts the weeds of cultivation are many and varied. Mr Druce remarks of Wigtownshire: "There is little in the flora to suggest its northern situation. One could easily imagine one was walking through the Midlands did not the prevalence of *Lepidium Smithii* and *Ceanothus crocata* suggests a more western flora. In mountain flowers it is almost destitute. The drier mosses are singularly sparing in the carices, and even *Juncus squarrossus* is rare. *Hobenaria chlorantha* is present, to the exclusion of *H. bifolia*." Owing to the lateness of the season I had not an opportunity of verifying Mr Druce's last statement about *H. bifolia*; but it is very strange if it is true. Also many plants rare in Kirkcudbrightshire are more common in Wigtownshire, and *vice versa*.

I shall not inflict on you a list of the Wigtownshire plants, but I trust it may be useful and interesting if I were to make a few comparisons as to the abundance, the rarity, or absence of certain plants in the two Galloways, and in doing so I shall follow no definite order. The luxuriant fern vegetation of Dunskey Glen, near Portpatrick, interspersed with large patches of magnificent specimens of *Equisetum maximum*, reminded me of tropical vegetation or of the forests of the coal period. At Dinvin, again, the ground under the trees is one carpet of matted ivy, while at Monreith grounds the most striking feature is the profuse growth of *Lychnis dioica*, making the woods a perfect blaze of red, and excluding almost entirely *Mercurialis perennis*, so common in the woods of the Stewartry. Every visitor to Castle-Kennedy admires its pinetum, or collection of conifers, one of the best in the kingdom, while its lochs, terraces, and grounds would amply repay a good day's botanising. The sandy shores of Monreith Bay are gay with a profusion of *Ononis arvensis*, *Erodium cicutarium*, *Convolvulus soldanella*, *Eryngium maritimum*, and *Galium*. At Lag Point, south of Monreith Bay, there is an almost complete cover of *Salsola Kali*, resembling a field of young whins. In some

places north of Port-William *Glaucium luteum*, *Malva moschata*, and a prostrate form of *Vicia sylvatica* are most conspicuous, and south of Port-William *Crambe maritima* is in plenty. I saw one field almost covered with wild carrot and another with bugloss. Of ferns, the Parsley Fern, Green Spleenwort, and *Cystopteris fragilis* seem to be absent. The Royal Fern, now rare, was formerly very plentiful about Mochrum Loch, &c., but it has shared the fate of many other rare native plants—almost complete extirpation. A person told me that in her youth it was cut and dried to cover potatoes, &c., as brackens are commonly used, but that it had been carried off in cartloads by fern vendors. Mr Druce did not notice *Ranunculus bulbosus* in the county. *Hypericum dubium* is the most common St. John's wort, and *Epilobium obscurum* the most common willow herb. The typical plants of the county are *Lepidium Smithii*, *Cœnanthe Crocata* ("hech-how") *Carum verticillatum*, and *Jasione montana*. The Rock Rose is very rare and so is Golden Rod, so common in our sub-alpine glens. Swine's Cress is very common, though very rare in the Stewartry. Some of the shore plants become scarcer as we proceed up the Solway Firth, while others seem to increase in abundance. For instance, *Scilla verna*, the vernal squill, so abundant in spring on the heughs of the west coast, does not occur to my knowledge east of the River Dee. *Geranium sanguineum*, on the other hand, seems to increase in frequency as we go eastwards, until we find it in plenty at Almorness. *Erodium cicutarium* is very rare in the Stewartry but very plentiful in such sandy spots as Port-Logan and Monreith Bay. *Scutellaria minor* has been recorded from only one or two stations in Kirkcudbrightshire, whereas it is frequent in damp places between Glenluce and Port-William. I could easily point out other differences in the frequency, rarity, or absence of plants from the two Galloways, but the above will suffice.

I have compared the lists from Wigtownshire and Kirkcudbrightshire, and I find that while nearly seventy plants recorded from the Stewartry have not yet been found in the "Shire," only about twelve plants in Wigtownshire have not yet been noticed in Kirkcudbrightshire. These are *Sagina maritima*, *Spergularia neglecta*, *Erodium maritimum*, *Carduus tenuiflorus*, *Bartsia viscosa*, *Thymus chamædrys*, *Lamium intermedium*, *Euphorbia paralias*, *Equisetum maximum*, *Isolepis savii*, and *Caucalis nodosa*. The most of these should be in the Stewartry. Those in Kirkcud-

brightshire, but not yet recorded from Wigtownshire, where I have no doubt many of them will yet be found, are: *Hypericum hirsutum*, *Linum perenne*, *Radiola millegrana*, *Geranium pratense* and *sylvaticum*, *Rhamnus frangula*, *Genista tinctoria* and *Anglica*, *Ononis spinosa*, *Medicago lupulina*, *Teesdalia nudicaulis*, *Drosera Anglica*, *Alsine verna*, *Sisymbrium thalianum*, *Subularia aquatica*, *Orobus sylvatica*, *Vicia lathyroides*, *Lathyrus sylvestris*, *Potentilla fragariastrum*, *Saxifraga stellaris*, *Chrysosplenium alternifolium*, *Sedum rhodiola* and *villosum*, *Cicuta virosa*, *Æthusa cynapium*, *Meum athamanticum*, *Viburnum opulus*, *Adoxa moschatellina*, *Galium cruciata* and *mollugo*, *Valeriana dioica*, *Knautia arvensis*, *Serratula tinctoria*, *Carduus heterophyllus*, *Campanula latifolia*, *Vaccinium Vitis-idaea*, *Pyrola media*, *Veronica scutellata* and *montana*, *Lathræa squamaria*, *Calamintha clinopodium*, *Stachys betonica*, the *Utricularias*, *Polygonum bistorta* and *minus*, *Rumex hydrolapathum*, *Euphorbia exigua*, *Salix herbacea*, *Listera cordata*, *Habenaria albida* and *bifolia*, *Epipactis latifolia*, *Ruppia*, *Allium vineale*, *Typha angustifolia*, *Scirpus sylvaticus*, *Cladium mariscus*, *Glyceria aquatica*, *Millium effusum*, *melica nutans*, *Carex remota*, *filiiformis*, *sylvatica*, *elongata*, *limosa*, *teretiuscula*, and *aquatilis*.

It will thus be seen that Wigtownshire has leeway to make up before her list of plants equals that of the Stewartry. In conclusion, I would urge the expediency and even the necessity of embracing the Wigtownshire plants in any future edition of our local flora.

Note.—Many of the above plants have been found. 1890.

J. M'A.

6th of January, 1888.

Mr ROBERT MURRAY, Vice-President, presided. Twenty-eight members present.

New Member.—Mr Thomas Kerr, Teacher.

Donations.—“The Macs of Galloway,” from the author, Mr Patrick Dudgeon of Cargen; “Annan and its Neighbourhood,” by Mr Frank Miller, of Annan; the Journal of the Elisha Mitchell Society; the Transactions (Vol. IV.) of the New York Academy of Sciences; the Essex Naturalist for December; and a cast of the cup and ring markings from the stones at High Banks, Kirkcudbright, from Mr J. M'Kie.

COMMUNICATIONS.

I. *Dumfries 250 Years Ago.* By Mr James S. Thomson.

I intend in these few notes to call up a few of the characteristics of society as it existed here 250 years ago. The features are strongly akin in many particulars to those existing in our own time—the same failings are here portrayed and the same virtues, and the names are often those of dwellers in our midst. The notes are mainly taken from past records of old session-books, the truth of which I have taken pains to ascertain. In reading over the old records of the town—both municipal and sessional—one is taken back to the time of intense religious feeling and hard fighting that then existed in Scotland. Let me briefly recall the position of affairs during the period from 1635 to 1654. The National Covenant was signed in 1638, and the General Assembly had become rather than Parliament the power of the land, and, as has been justly observed, “Church and State were not convertible terms, but the former permeated the latter so thoroughly that the Government wore quite a Theocratic aspect. What the Assembly resolved upon the estates readily assented to.” The remembrance of this has to be borne in mind when the various penalties enforced are mentioned here. Various matters are touched upon that have an aspect almost comic in the light of the present, showing history to be repeating itself in small as well as great events. There is an impression that life at this time was painfully austere, but from these records we gather that people’s daily life was somewhat like what exists in the present. Concurrent with deep religious feeling there existed amongst the better class the weak brother whose life was not all that the minister could have wished. Dealing first with the social habits of the town, we find a set of roystering blades who carried their drinking to the extent of having the town drummer to assist them in their orgies, and it is ordained; “Nov. 1, 1649. That the session, resenting the great dishonour done to the Lord by sundry persons in this burgh in the height of their cups, not only abusing the creature to the excess of riot through drinking of healths, but likewise by calling the drummer to beat the drum at every health, do therefore discharge the drummer to answer any persons in such ungodly demand under pain of inflicting upon him the sharpest measure of kirk discipline and extruding him from his place withal. Margaret D., spouse to James L. D., to be rebuked in sackcloth for the sin of drunken-

ness." We have also the case of the habitual drunkard coming up, and although little is said, the mere intimation seems to convey the impression that a warm interview was in store. Short, sharp, and summary is the intimation, "Nicholas Greer and Marion Brown, for habitual drinking of hot waters, to be summoned." The ten o'clock movement is looked upon as being an innovation and Forbes Mackenzie as being an interference with the liberties of the lieges, but strange it is to find that both were anticipated so long ago. Drinking in any alehouse or tavern after ten o'clock at night is forbidden under pain of ecclesiastical censure, and it is commanded "that no person of whatsoever condition be found drinking on the Lord's Day in taverns or ale-houses." Parties at bridals and baptisms seem to have occasioned a good deal of scandal, not only as to the numbers invited, but also as to the disorderly habits of some of those who attended them, for we find that the minister is to intinate that none who have children to be baptised shall invite above twelve nor exceed the number of twenty-four at bridals, and no disorder to be committed. From the foregoing allusions one can quite understand that the Dumfries burgesses were men possessed of means, and with the will to enjoy the good things of this life. They seem also to have had a proper estimation of their own position and importance in the community, and to have had little reason to pray for a guid conceit of themselves, as the following will show: A supplication was given into the session, bearing in effect "That they, a number of merchants, as burden-bearers of this burgh (no ways to be balanced with the vulgar and promiscuous multitude, &c.), claim the two foremost seats of the loft in the kirk called the common loft, for their better accommodation (which place has been for many years possessed by plebeians who rudely and uncivilly have rushed themselves in there without any order), for which cause they oblige themselves to make new entries thereto and erect rails behind, so that those behind be not frustrate of the benefit of the doctrine," and the session ordained accordingly. A rev. gentleman, some time ago, complained of the offensive nature of the language employed by the lower classes, and the same thing seems to have caused serious concern to the session in those days, but in this case means to secure decency of language were adopted which one may well envy at the present time.—"1649.—Country people resorting to the mercat belching forth horrid oaths and impreca-

tions, rending the name of God asunder, are to be delivered over to the Session for a deserved measure of punishment. Aug. 22.—James Moffat and James Wilson to search next Wednesday for cursers.” We have also private parties dealt with, and the nature of their punishment. “R. S., for habitual cursing and drunkenness, to declare his repentance next Sabbath, and is enacted under the penalty of banishment not to be found in the like sins. M. B., for cursing her husband, to sit two days in the pillar. J. T., sword sharper, to be rebuked for ordinary cursing.” We come next to a matter that caused much excitement all over the country at this time—the crime of witchcraft; and from the records here the Session seems to have had its feelings far more under control than in many other places. “Jan. 17, 1650.—The minister is to intimate that whosoever person shall brand any man or woman with the common upcast of witchcraft, unless they have pregnant and warranted grounds, shall have the sharpest kirk discipline. Jan. 5, 1654.—R. S. deponed that he heard M. C. say to Agnes J. ‘That the devil rode on her back seven years, and that she was but a dyvour,’ or witch.” The sin of talking scandal seems to have been put down with a firm hand at this time, and the various punishments meted out are of a kind fitted to keep unruly tongues in order. “Thos. Meik, for slandering Agnes Fleming, is ordained instanter to stand in the gorgets (a sort of pillory with an iron ring for the neck) at the Trone till 12 o’clock, and thereafter upon his bare knees to ask her forgiveness at the Mercat Cross.” “Janet Jardine is enacted, under the pain of twenty pounds, never henceforth to be heard scolding.” “Catherine Purdie, for calling Bessie Harper a lewd lown, debusht, mainsworn glutton, filthy lown and thief, wabster’s get, skemland stable raker, and praying ane black sight to Bessie and her bairns, to be rebuked from the body of the church.” A departure from virtue such as is now commonly brought before the Divorce Courts was dealt with as follows: “Allan Cunningham, for adultery, is ordained to appear before the Presbytery in sackcloth, and there confess his fault, and thereafter be remitted to the Session. John Black, for the same offence, to sit seven Sabbaths in sackcloth, and the first and last to stand barefooted at the church door between the second and last bell.” For a departure from virtue for the fourth time on the part of a woman, she is ordained “to be carted from the town.” Absence from worship was a frequently recurring subject before the Session,

and a few particulars of how it was met are of interest at the present time, when means to fill our churches are often discussed. "Jan. 28, 1641.—The Session, resenting the great slackness and remissness of certain persons in resorting to God's house, but more especially those of the Landward Parish, have, for remeid thereof, statute and ordained that every gentleman of note in the parish shall pay for every day's absence from the kirk thirty shillings, *toties quoties*. Also the lady Elshieshields, the Lady Craigs, &c., to be summoned for not haunting the kirk, and everyone of the inhabitants of Kelton is fined for absence." Akin to the sin of not attending worship, although more trivial, is the following: "The minister to intimate to the congregation that henceforth when they address themselves either to the Sabbath or week-day sermon that they walk not in the churchyard inventing worldly thoughts, but go into their seats, that so their unbecoming carriage be prevented, and the Lord less dishonoured than hitherto." I may also cite a few things that are forbidden as sinful. "Thomas Richardson purgeth himself, but paid twelve shillings for playing at cards." "John Clerk Taylor, for being observed to shave sundry of this burgh on the Lord's day in the morning is commanded that he be not found in the like breach of the Lord's day under the penalty of ten pounds." "A woman for gathering cale is fined and set in the pillar, and the year after this May games are forbidden and Dorothy Herries and Marion Hairson for going to St. Jargon's Well on the first Sunday in May in ane superstitious way to fetch the waters thereof, are ordained to acknowledge their offence in the body of the church on Sunday." There are also a few remarks about the poor that may prove interesting. "The minister is desired yet, as oft before, to intimate that the most part of the congregation are sparing (and many give nothing at all) to the great necessities of the poor, and the magistrates will be enforced to take course with those who withdraw from so pious a duty. The minister is to intimate on Sunday to the deficient in the necessary duty of charity to the poor that their names henceforth shall be read out publicly, to their great disgrace." I cannot close without a few remarks as to the feeling towards our neighbours over the border. There seems to have been little goodwill, which may possibly be accounted for by the fact of some of the burghers having been taken captive, yet at times there seems a race feeling at the bottom of it, as if they recognised the English

as their "auncient enemies." "July, 1640.—John M'Courtie, remitted by the Presbytery to the censure of this Session for his often falling into sin with Isobel Wright, they are ordained to resort to the pillar in sackcloth the ensuing Sabbath, and there, in face of the whole congregation, cancel and destroy the paper which they brought from England of their unlawful marriage and disclaim the same and for ever dishaunt her company. John Maxwell, one of the elders of the Session, for accompanying his brother over the march to their unlawful way of marriage contrair to the discipline of the church, is removed off the session, and ordained to pay twenty punds to the poor." "John Laurie, piper, petitions the Session for liberty to use and exercise his calling of piping and playing, undertaking not to play at all to any of the English. The Session notwithstanding, conceiving his way of living to be useless, have unanimously discharged him henceforth to use the same, and to take himself to some honester way of living." It may be conceived that boycotting would be unlikely to exist amongst neighbours at this time, but such undoubtedly was the case, for we find the Session (April 29, 1647), giving "liberty to Mr John Corson and Mr Cuthbert Cunningham to speak with the Lord Herries, notwithstanding he be excommunicate, in respect they have sundry business of good with his lordship. Also grants the same liberty to Robert Newall anent his affairs with Maynes and John Maxwell of Mylstone." I simply lay these extracts before you as of antiquarian interest, and forbear, as contrary to our custom, to criticise in any way their religious bearings. They are matters that concern our good town, and serve to throw light upon a chapter of our history of no mean importance. Before concluding, permit me to read you the duties laid down to elders of the church. Their position at this time seems to have been particularly onerous, and the scale of Christian duty and observance no mean one. Their duties were to enquire as they went through their several quarters every quarter of the year: (1) How the master of the family behaves himself. If his wife walk orderly. If children and servants are obedient. (2) If children be trained up in their learning and honest trades. (3) If they be kept from profaning the Sabbath, and brought to the public worship. (4) If the little catechise be in every family and exactly learned. (5) If there be family worship, and the word read therein; and if in each family there be a bible and exhort to private worship. (6)

If there be cursing, swearing, scolding, and drunkenness in any of the families. (7) If any absent themselves from public worship, and who they are, and to exhort to keep the Thursday's sermon and Presbytery's exercises. (8) If there be any servants brought in, and if they have testimonies from the places they come from. (9) If there be any idle persons in families, and profane persons brewing. (10) That none of whatsoever condition be found drinking on the Lord's Day in taverns or ale-houses. (11) That no scandalous person coming from elsewhere be permitted to enter this burgh.

II. *The Meteorology of the Dumfries District in 1887.* By the Rev. WILLIAM ANDSON, of Kirkmahoe.

It may be right to give an explanation here respecting the instruments used in taking the observations which are recorded in the subjoined table. For the first three months of the year a common standard barometer, with Vernier scale to measure tenths and hundredths of an inch, was used. It was considered fairly reliable, though it had not been scientifically tested. But in the beginning of April it was replaced by a new one, made by Adie & Wedderburn, of Edinburgh, with Vernier to measure to two thousand parts of an inch, which had been tested in the office of the Scottish Meteorological Society, and was recommended by Dr Buchan, the secretary of that society. During the first two months of 1887, the temperature observations were taken from a Self-registering Sixe Thormometer, kept in the shade, but not protected. But since early in March last two thermometers have been used—a Philip's Self-registering Maximum (mercurial) and a Rutherford's Minimum (spirit)—both certified at Kew, and placed in a Stevenson box or screen, four feet above the grass in an open garden space. The rain guage is a Glaisher's, of 5 in. diameter, with the mouth raised 10 in. above the grass. The observations of the barometer are taken twice a day, at 9 A.M. and 9 P.M. Those of the maximum and minimum thermometer are taken at 9 P.M. for the previous 24 hours; and the rainfall every morning at nine for the same period. The direction of the wind is taken at 1 P.M., mostly from the vane of the Midsteeple. The instruments were inspected in September last by Dr Buchan, and on being compared with his standard ones were found to be extremely accurate.

Months.	BAROMETER.				Self-Registering Thermom. in shade 4 feet above grass.					RAINFALL.		
	Highest.	Lowest.	Range.	Mean at 32° and sea level.	Highest.	Lowest.	Mean Max.	Mean Min.	Mean Temp. of Month.	No. of Days it Fell.	Heaviest in 24 Hours.	Amount.
1887.	Inches.	Inches.	Inches.	Inches.	Deg.	Deg.	Deg.	Deg.	Deg.		Ins.	Ins.
Jan.	30.370	28.850	1.520	29.827	51	22	42.5	33.3	37.8	23	0.79	3.34
Feb.	30.600	29.304	1.296	30.205	54	21	46.4	34.2	40.6	11	0.46	1.97
Mar.	30.470	29.240	1.230	30.046	50.5	24	47	33.2	39.8	13	0.35	1.58
April	30.632	29.100	1.532	30.012	65	27.5	53.3	35.1	44.2	11	0.38	1.66
May	30.590	29.212	1.288	30.045	60	30	59.6	41.7	50.7	11	0.41	0.98
June	30.520	29.789	0.731	30.192	87	38.2	70.6	43.8	59.7	7	0.36	0.56
July	30.378	29.410	0.968	29.961	80.5	39	69.8	52.1	60.0	21	0.87	4.01
Aug.	30.384	29.240	1.144	29.938	77	36	67.8	48	57.9	14	0.91	2.62
Sept.	30.565	29.100	1.465	29.877	68.8	30.5	62.4	44.7	53.5	20	0.79	4.00
Oct.	30.563	29.189	1.374	30.061	63.5	24	52.8	37.3	45	12	0.28	1.34
Nov.	30.321	28.537	1.784	29.665	51.5	23.5	45.1	34.4	39.7	19	0.81	3.62
Dec.	30.260	28.011	1.349	29.749	51.3	21	41.1	31.8	36.5	19	1.26	5.31
Year	30.632	28.537	2.095	29.964	87	21	54.8	39.5	47.2	181	1.26	30.99

Barometer.—The highest reading of the year was on the 17th April, and reached 30.632 inches; the lowest on the 3rd November, 28.537 in. Annual range, 2.095 in.; and mean pressure (at 30° and sea-level), 29.964 in. In 1886 the range was 2.923 in., and the mean pressure 29.800 in. The month in which the greatest fluctuations of pressure occurred was November, when the range was 1.784 in.; but it was considerable also in January and in September and December. In June, when the weather was remarkably fine and settled for several weeks in succession, the range did not exceed 0.731 of an inch, and the mean pressure of the month was unusually high, being no less than 30.192 in. But the highest mean pressure of the year was in February, viz., 30.205 in., with readings ranging from 29.304 in. to 30.600 in. In the months from February to June, inclusive, anti-cyclonic conditions for the most part prevailed, and the mean pressure in each was over 30 inches (mean of the five months 30.100 in.), with a rainfall very much below the average. In 1887 there has been no such excessive fall of the barometer as occurred in December, 1886, and the storms which were at times experienced were only of moderate violence, and did little damage, at least in this part of the country.

Temperature.—The highest temperature of the year occurred on the 25th June, when the thermometer rose to 87°, and the lowest on 8th February and 22d December, when it fell to 21°, giving an annual range of 66°. The mean maximum for the year, as will be observed from the tabular report, was 54.8°, and the

mean minimum 39.5° . The winter quarter, taking in December along with January and February, was not characterised by any great extremes of temperature. In these months there were 50 days in which the thermometer fell to the freezing point and under, with an aggregate of 228° of frost. This compares favourably with the previous year, in the same months of which the thermometer registered 444° of frost in 72 days. But it indicates at the same time a winter of considerable severity, the mean temperature of these months being about 37.6° , as compared with an average of 39° . The wintry weather, however, extended as usual a long way into March, in which 10 nights of frost were recorded, with an aggregate of 28° . There was frost also to some extent in April and May. April had 10 nights with 24° , and May 2 nights with 3° . The temperature of the spring months was considerably below the average, with a prevalence of northerly, north-easterly, and north-westerly winds, and unusual dryness, which awakened fears of a late and deficient harvest. But the marked rise of temperature, which came with the bright and sunny weather of June, and was continued in July, along with copious rains in the latter month, proved so favourable to the progress of vegetation, that the harvest, instead of being later, was rather earlier than usual, though deficient in quantity in light soils, from the want of sufficient moisture at an earlier period. In June there were 14 days on which the maximum temperature exceeded 70° , and in seven of these it rose above 80° , ranging from 70° to 87° . In July also there were 14 days with a maximum of over 70° , the range being from 70° to 80.5° . The mean temperature of June was 59.7° , being more than 4° above that of last year, and about 3° above the average of the month. The mean temperature of July was still higher, being 60.9° , exceeding that of July, 1886, by 2.6° , and the average of former years by 1.3° . The hottest days occurred in the latter half of June, but in July the nights were warmer. As illustrating the effects of this unusual heat on vegetation, it may be mentioned that in Mr Henderson's garden at Newall Terrace ripe cherries were gathered on the 23rd of June, ripe strawberries on the 25th, early vegetables, such as peas, turnips, carrots, and onions on the 30th, and ripe gooseberries on 11th July. August and September do not call for any particular remark on the point of temperature. Both were about 2° below the average, and there was a degree of unsettlement in the weather between the middle of August and the middle of September, which

greatly retarded the work of the harvest, and caused in many cases serious damage to the grain crops. In the other autumn months there was an unusual decline of temperature, the mean of October being only 45° and that of November $39\cdot7^{\circ}$, as compared with $49\cdot8^{\circ}$ last year in the former month and $42\cdot1^{\circ}$ in the latter. As early as the 8th October the higher hills in Dumfriesshire and over Scotland had a covering of snow, and on the night of the 11th or morning of the 12th the thermometer registered 8° of frost. Northerly and easterly winds prevailed in both these months, and in November the sky was for the most part overcast, with a consequent minimum of sunshine, which made the weather both cold and gloomy. October had 10 nights of frost, with an aggregate of 28° , and November 13 nights, with an aggregate of 47° . The total number of days throughout the year in which the thermometer was at or below the freezing point was 96, and the aggregate degrees of frost 360. In 1886 the number of days was 112, and the aggregate 536° . So far, however, was the excess of cold this year counterbalanced by the unusual heat of June and July that the mean temperature of the year was 1° higher than that of 1886, viz., $47\cdot2^{\circ}$ as compared with $46\cdot2^{\circ}$ in the latter year. Comparing this with the mean temperature of other parts of Scotland, as reported this week in some of the newspapers, I find that Ardrossan had a mean temperature for the past year of $47\cdot3^{\circ}$; Leith, of $47\cdot2^{\circ}$; Aberdeen, of $46\cdot4^{\circ}$; and Wick, of $45\cdot3^{\circ}$. It may be interesting to note, as showing the difference between a northern and southern temperature, that the mean annual temperature of Greenwich for the last fifty years is $51\cdot8^{\circ}$. Mr Dudgeon of Cargen reports a mean for the year of $46\cdot2^{\circ}$. How this difference from the temperature of Dumfries is to be explained I cannot say; but I have repeatedly observed that both the highest maximum and the lowest minimum temperatures of the month at Cargen are, as a rule, lower than those reported at Dumfries by one or two degrees, and sometimes more. There must be different local conditions affecting the temperature to give rise to this difference in places so near one another. The mean of $47\cdot2^{\circ}$, though above the mean of the previous year, is still somewhat under the usual average.

Rainfall.—There were 181 days on which rain or snow fell (rain, 170; snow, 11); on 34 of which, however, the fall did not exceed one hundredth of an inch; total, 30·99 inches. In 1886 rain or snow fell on 224 days, with a total of 41·13 inches. The heaviest fall in 24 hours in 1887 occurred between 9 A.M. of 6th

December and 9 A.M. of the 7th. There was very heavy rain on the 6th, followed by snow during the night, which at 9 A.M. measured 6 inches in depth; and was the heaviest snowfall of the year. The rain and melted snow together gave a depth of 1·26 inches in the guage, equivalent to 126 tons of water to the acre. The year, as a whole, however, was remarkably dry. There were two months in which the rainfall was less than one inch; May having 0·98 in., and June only 0·56 in. From the 8th June to the 2nd July not a drop of rain fell. February, March, and April, and later in the year October, were also abnormally dry; the aggregate rainfall of these six months being only 8·09 in., whereas in the previous year it was 16·79 in., and the mean of the preceding 26 years as observed at Cargen was upwards of 19 in. The total rainfall of the year was 30·99 in.: that of 1886 was 41·13 in.; showing a deficiency for the past year of 10·14 in. as compared with the previous one, and of 13·66 in. as compared with the mean of the preceding 27 years at Cargen. In consequence of this unusual dryness, especially in the first half of the year, many of the springs and wells in the district failed as early as July, and were not replenished again till December. The same deficiency of moisture seems to have prevailed in a greater or less degree over the whole country, but more on its western than on its eastern side. Thus Colmonell, in Ayrshire, records a deficiency of more than 10 in., Greenock of nearly 15 in. (the lowest since 1875), Bridge-of-Allan of about 9 in., Leith of nearly 7 in., and East Linton in Haddingtonshire of nearly 5 in. In illustration of the fact stated, it may be mentioned that the River Tay, near Perth, is said to have been lower by half-an-inch on July 10th than its lowest point in 1826, which was one of the driest years on record; and the Nith for many weeks was lower than the writer remembers to have seen it.

There were few thunderstorms during the year, and none of any severity. The writer of this paper observed only six occasions on which thunder was heard—two in July, on the 2nd and 31st; two in August, on the 17th and 18th; one on the 1st November, with sharp hail showers; and one on 14th December between 4 and 5 A.M., also accompanied by hail showers. The total number of hailshowers observed was ten.

The following is a summary of the wind directions for the year:

Calm or Var.	N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.
7	41	35	17	24	23	90	54	74

Note to Mr Thomson's Paper.

The following will throw light upon the expression "profane persons brewing" (page 28): "Bailie Johnneson reports that in going through the town last Sabbath he found in the house of James Moorehead a large pot upon the fire boyling wort, and in John Baxter's house Wright found the said James Moorehead's wife with a choppin stoup in her hand, and the said James Moorehead's wife sitting at a table and said she was seeking barm."

The following extracts may be interesting from the form of punishment:—"1641. Bessie Black for her 3rd departure from virtue to sit six Sabbaths and at the cross in the Jongs." "1642. Euphane Thomson and Jane Johnson, servants, for scolding each other, to be put in the Jongs presently." "1644. A man and his wife for slander are sentenced to stand at the kirk style with the branks in their mouths." "1695. It is statute and ordained that who drink to excess shall pay the Nobleman twenty pounds; the Barron, twenty merks; the Gentleman Heretor or Burgess, ten merks; the Yeoman, forty shillings; the Servant, twenty shillings; and the Minister the fifth part of his stipend.

III. *The Druidical Circle in Troqueer.* By Mr JOHN BROWN, F.E.I.S., of Drumsleet.

The Druidical circle on the Hills farm lies about four miles from Dumfries, a little over half a mile to the left of the farm called East Hills, as one journeys towards Lochrutton. Or, taking the footpath to Lochrutton Kirk, a quarter of a mile past Turnfeen, the traveller would find it about 200 yards to his left just as he is about to reach the top of the ascent. It is, on a contour line of the trigonometrical survey maps, shewn to be situated exactly 500 feet above the level of the sea, and lies in a somewhat depressed place close to the last rising of the hills behind, which attain 625 feet. In the depression is a platform evidently to some extent artificial and irregularly circular, 70 to 80 feet in diameter. The top has been levelled, or rather made level, by using the materials brought from the sides. On this little platform is the Druidical circle. There are now ten stones in the circle, but, judging from the distances from stone to stone, it is probable there were a few more when the circle was complete. There is no central stone; all are round the sides. One was $13\frac{1}{2}$ feet distant from the next; other distances were, 17 ft., 19 ft. 8 in., 25 ft., 34 ft. 4 in., 37 ft. 7 in.; the average is about 25 ft. 3 in.; and the circumference

227 ft. 6 in. This measurement is not given as strictly exact, but includes the diameter of each stone. The stones are not from the quarry in the hill-side, which is a soft clay slate; but they present the usual forms of boulders obtained from the drifts of the glacial period. They are not granitic, and they are not silurian, yet seem to be metamorphic, judging from the appearance of white soft-looking grains of which they are largely composed, with one exception. This exception is the only one which is distinctly silurian, and is the most remarkable one in the whole circle, as it contains some of the "cup markings" on its flat top, which have so strongly attracted the notice of antiquarians of late. This stone has a flat top, but it is its natural top, and not made flat by the hand of man. It has two straight sides, the rest is roundish. From the angles two lines of 35 in. and 36 in. can be drawn. It has a circumference of nearly 10 ft. One of the cups is smaller than the others, of which there are three on the top, running in line nearly straight about a foot in length. A line drawn straight across the centres of the first and third would just cut the edge of the circumference of the second. The diameter of each of these three is the same, that is 8-10ths of an inch, and of capacity to hold a boy's marble—not the *taw*, but the forfeits. A good counter might be able to run the number of holes round it to a higher figure, but there will be no difficulty in counting 12 similar cups round the sides. The three on the top alone might arouse suspicion as to their great antiquity, but the others uphold their claim in a manner not to be disputed.

3rd of February, 1888.

Mr THOMAS SHORTRIDGE, ex-Provost, presided. Twenty-six members present.

New Member.—Mrs Thompson, Rosemount Terrace.

Donations.—Two volumes from the author, Mr Peter Gray, one on Fungi and Mosses, and the other on Seaweeds and Shells; a pamphlet on the Rock-Sculpturings in Kirkeudbrightshire from the author, Mr George Hamilton; a Communion Token of the associated congregations of Dumfries, dated 1766, from Mr Barbour; two Communion Tokens of St. Mary's Church, Dumfries, from Mr William Allan; the Tokens of Balmaclellan, Dalry, Minnigaff, and Kells, from Mr M'Andrew; and of the following

Parishes from the Kirkeudbright Museum, viz. : Borgue, Buittle, Dalbeattie, Dalry, Girthon, Kelton, Kirkeudbright, Kirkmabreck, Kirkbean, Newabbey, Parton, Kerwick, Terregles, Troqueer, Twynholm, and Urr.

COMMUNICATIONS.

I. *Botanical Notes for 1887.* By MR JAMES FINGLAND of Thornhill.

The season of 1887 will be remembered for its ideal summer weather, which, for at least the months of June and July, was an almost unbroken record of sunshine and genuine warmth. This hot weather, although favourable and enjoyable for outdoor botanical work, was fatiguing for long excursions on foot, whilst a certain drawback was experienced in the shorter time plants remained in bloom. The rather unfavourable character, too, of the early autumn caused an unusually fine season to be also a short one from a field botanist's point of view.

A notable feature of 1887 was the early flowering of many plants, which I more especially observed amongst aquatics. The intermediate form of the yellow water lily, which occurs in Glencairn, was gathered in flower on the 12th of July last. In 1885 it was seen in flower on the 28th of August—perhaps, however, at a later stage, for which a few days might be deducted; nevertheless, making a marked difference of nearly six weeks between the two dates. The water lobelia at Loch Urr I obtained in flower on the 20th of July last, which was just a month earlier than in the previous year. Some of the Potamogetons or pondweeds, I am sure, came very much earlier too, but I have no previous dates to compare with. It has occurred to me that the flowering of aquatics might more fairly indicate the character of a season in regard to temperature, these plants not being affected by drought, which so often hastens the maturing of terrestrial vegetation by stunting the growth, were it not that aquatics probably derive a stimulus and benefit from direct sunshine whether the atmospheric temperature is of an average warmth or not. The amount of solar heat absorbed by a lake will vary with its depth or shallowness. Other affecting circumstances will be found in its physical surroundings, situation, or exposure. The matter may appear to be unimportant. It is not so, however, to a collector who wishes to secure specimens valuable for exchange from a locality at some distance. Disappointment may be thus saved by

making a careful calculation. In the instances of early flowering I have given I do not think the atmospheric heat (which did not begin till June) sufficiently accounts for the phenomena, but that the sunshine of the earlier dry months had a share in it.

In giving a summary of results for 1887, I am indebted to Dr Davidson, Sanquhar, for some notes from his district. The finds of most interest which he reports are *Scabiosa arvensis*, at Drumbuie; *Arabis hirsuta*, Kello Linns; *Veronica hederæfolia*, *Phleum arenaria*, and *Lolium temulentum* variety *arvense*, from the river side at Sanquhar; *Cerastium semidecandrum*, from Crawick; and *Potentilla argentea*, near Holywood. Two of these at least, if not three, are additions to our Flora. Mr John Corrie, Moniaive, has made two good finds, both in his own parish of Glencairn. One is a valuable addition to our family of native Orchids in *Malaxis paludosa*, although Dr Grierson informs me since that he collected the same plant a number of years ago in the parish of Keir, but does not know whether it now exists there or not. The other plant is *Carex irrigua*, a locality for which has hitherto been a desideratum. In the Thornhill district I have to add *Callitriche autumnalis* and *Nitella flexilis* from the parish of Closeburn. Two other additions to the county are *Carex Æderi*, for certain at last, growing in considerable quantity in a dried-up pond near Auldgirth, and *Utricularia intermedia*, found at Loch Urr. Two more plants, *Stachys betonica* and *Hippuris vulgaris*, are new to the district. The former I gathered near Auldgirth, this new locality, therefore, becoming a link between the only other two localities for it at Sanquhar and Caerlaverock in the Nith valley; the latter plant was found in Closeburn, but the specimens of it there were rather dwarfed. Mr Corrie and I met with a very luxuriant growth of the same plant in Fingland Lane, Kirkendbrightshire, amongst with *Potamogeton rufescens*, *Spartanium minimum*, and *Carex paniculata*. In critical genera *Rosa tomentosa*, var. *scabriuscula* is an addition and a variety of *Rosa canina* between "*arvatica*" and "*Watsonii*." There has also been found a variety of *Rosa mollis*, "*psuedo-rubiginosa*," on the Nith, which will, I think, be new to Scotland, as Mr Bennett of Croydon, who kindly named it for me, and also sent the specimen to Mr Baker of Kew, to have it confirmed, informs me that it has only hitherto been found in York and Surrey. In brambles, *Rubus macrophyllus* and *Rubus umbrosus* have been found near Annan, and *Koehlerii* at Auldgirth. In Mints, the *subglabra*

variety of *M. sativa* has been identified from the Nith near Kirkland. A pendulous and distinct form of *Carex vesicaria*, from a marsh near Kirkbog, concludes our list from Upper Nithsdale.

During the season, however, I made one or two excursions to the Dumfries shore of the Solway, thinking I might find there some additions to our Flora, and I was not disappointed, having been able to add several species and confirm some previous doubtful records. Thy physical character of the shore is on the whole rather monotonous. The margin between the cultivated land and high-water mark (in many places of little width) consists mainly of sand or mud, merse-land, and shingle or gravel, rougher or finer. Each variety of land surface has its own grouping of plants, and throughout the season lovers of flowers may find much to interest them. At Tordoff Point I gathered *Scirpus caricis* and *Allium vineale*, var. *bulbiferum* Syme. Near Annan Waterfoot, *Erodium cicutarium*, *Juncus Gerardi*, and *Alopecurus agrestis*. Between Powfoot and Newbie I found *Cakile maritima* and *Agropyron junceum*. These are all new records. The following plants, some of which are rare, were also collected: *Ranunculus sceleratus*, *Brassica monensis*, *Ononis spinosa*, var. *mitis*, *Eryngium maritimum* (very sparingly), *Filago minima*, and *F. germanica* (both in dry banks below Powfoot), *Matricaria inodora*, var. *salina*, *Polygonum aviculare*, vars. *vulgatum* and *arenastrum*, *Atriplex patula*, *Salsola kali*, *Ammophila arundinacea*, *Lepturus filiformis*, *Juncus glaucus*, *J. supinus*, var. *subverticillatus* (near Brow Well), and *Juncus maritimus*, from Mr Robert Armstrong, obtained near Caerlaverock.

For the purpose of making a comparison between the shore flora of Dumfries and its two adjoining maritime counties, I have looked up the records in last edition of the "Topographical Botany," and in case of Dumfries and Kirkeudbright using also recent lists. Of the total number of 87 species which are designated as "littoral" in the "Cybele Britannica" (of course this excludes a number of plants common on the shore, but which are found inland near "coast level" or in lower grounds), I find 46 recorded for Cumberland, 40 for Kirkeudbright, and 27 for Dumfries. As there are about 12 species unrecorded for this county that are common to both the other counties, we may expect a closer examination of our shore will reveal an additional number of species.

II. *Wood-Castle, Lochmaben.* By Mr JAMES LENNOX, F.S.A.

Wood-Castle, Woody-Castle, or Dinwoody Castle, is situate 1500 yards north-west of Lochmaben Town Hall, on the farm of Lochbank, on the estate of Elshields. It is a circular camp of British origin, and surrounded by a fosse and ditch which are well preserved, and also in part by remains of a second fosse, which, visible on the western and northern aspects, has disappeared on the southern and eastern. The extent of the fortification I have been at some trouble to ascertain by means of accurate measurements. There is one original entrance through the ramparts. Taking a straight line from this gateway (in line with the inner base of the rampart) to the most remote point within the lines the distance traversed is 207 feet. A transverse line, cutting this in its centre at right angles, measures 193 feet. The circumference of the fort, measured round the top of the rampart, is 704 feet. From the outer base of this rampart to the opposite outer base measures 280 feet. This rampart reaches the extreme elevation of 15 feet above the fosse on the north side, and declines to its least height towards the western aspect, where it is only eight feet high (at one point). This depression in the lines is directly opposite the gateway and at (what now appears to be) the weakest point in the defence. As the southern aspect is reached the rampart returns to about the same elevation as on the northern, and so it continues along the eastern face to the gateway. There is but one gateway, and it is situate on the east by north part of the fort: in width it is about 15 feet. At first sight a second gateway seems to be present directly opposite the entrance. But on more than a casual inspection it is found that the break in the ramparts on the east position is intentional, and has the pathway paved with boulders: whereas that on the west side is the result of demolition. What is left has the slope of the adjoining rampart, and there is no trace of a formed roadway. Besides, on the east the ramparts rise on either side of the entrance with an almost added strength, whilst those on the west dip gradually down to it. The interior of this British strength varies from two to four feet below the level of the rampart: the rampart rising highest above the camp level on the north side and lowest on the west. The fosse or ditch, which is still complete, runs in an unbroken manner from the north side of the gateway round the northern aspect of the fort to the west, where although traceable it becomes less distinct. In this clearly marked part it measures

15 to 16 feet wide. On the south-west it again deepens, and here it measures 14 feet, and so it continues to the south, where it altogether disappears. The second fosse, or rather what remains of it, commences at the north-east, being fairly marked on the side next the ditch, and reaching an extreme elevation of 8 feet, and sweeps to the north-west. At the west it is, however, barely traceable. But on the south-west aspect it again becomes marked, especially towards the ditch, and finally it ends at the south. This outer rampart is fast disappearing under the plough, and in a few years I fear no trace of it will remain. The gateway through this rampart, as shewn on the ordnance survey, has disappeared, but was situated about 70 feet north of the inner gateway. The greatest diameter of what remains of the camp is 370 feet. This runs from the south-west to the north-east. The ramparts are constructed of large loose stones, on which there is neither the mark of chisel nor trace of mortar. These boulders are covered with earth, dressed into a military shape. Having thus described the position, measurements, appearance, and construction of the camp, I pass to a consideration of its origin. Beyond all doubt the camp is British. This is obvious for the following reasons: First. It is circular. The fortresses of the ancient Britons are always found to consist of concentric circles of stones, whereas those of the Romans are invariably square. Hill Burton insists on the sameness of Roman camps in all parts of the world (p. 73 of History of Scotland), and says that in construction they evince "an extremity of immutability." And both he and Chalmers use "circular and British" and "square and Roman" as synonymous terms. Second. The ramparts are not of Roman construction. According to Chalmers (Caledonia Vol. I., p. 25) the ramparts of British forts "were composed of dry stones and earth, without any appearance of mortar or cement." Maclagan deals largely on this, but in a more extended form. This is the construction of "the lines" at Wood Castle. Third. The gateways through the different ramparts in a British strength are placed in a zig-zag manner, and not as in a Roman fort directly opposite each other. —*Vide* Hill Burton, p. 84-86, Vol. I. Fourth. The ancient Britons often chose lakes for fortresses. Now the position of Wood Castle is very peculiar. At the time of its construction it must have been a peninsular stronghold. On the south-east is the Mill Loch, on the south-west the Upper Loch, and stretching away along the whole of the west to the north is still mossy

ground, reaching to Chapelcroft Farm. This mossy ground passes to the north and ends on the north-east in a peat moss, used until lately by the inhabitants of Lochmaben to cart their peats from. Thus on three sides the camp was in the days of its occupation, in all probability, surrounded with water, or almost so, and the only possible mode of approach was from the east, where the gateway is. Wilson in his *Pre-historic Annals of Scotland* (Vol. II., p. 89) says of Wood Castle that it is "a remarkable circular fort near Lochmaben, in Annandale, which General Roy describes as a Roman post, though it differs in every possible feature from any known example of Roman castramentation. That it is a British stronghold is not now likely to be called in question. It bears a close affinity to the circular earthworks which accompany some of the Scottish megalithic circles. . . . The fortifications here specified are not, however, to be classed with the simple circular hill forts first noted, wherein we trace the mere rudimentary efforts of a people in the infancy of the arts. They display equal skill in the choice of site and the elaborate adaptation of such earthworks to the natural features of the ground." I have searched Roy's *Military Antiquities* for a description of Wood Castle, and I find no description of it. All I find is a ground plan and elevation drawn to a scale on Plate VIII. of "The Roman Post of Wood Castle." Now, Roy belonged to a school of antiquarians who tried to prove that the chief remains in the country are Roman, just as old-fashioned teachers tried to inculcate English grammar by teaching Latin rules. The circumstance that a Roman way passes close to Wood Castle is, I think, purely accidental, and the fact that the camp is not on a hill top cannot be considered as powerful evidence against the theory of its being British, when it is remembered that the Britons affected lakes, that the camp is of essentially British construction, and that the Romans have never been known to alter the characteristic shape of their encampments. Those who wish to pursue the matter further will be aided by consulting *Maclagan's Hill Forts of Scotland*, *Gordon's Itinerarium Septentrionale*, and *Leslie's Early Races of Scotland*.

III. *New Studies of Some Old Scotch Ballads.* By Mr WM. M'DOWALL, F.S.A.

Mr W. M'Dowall occupied about an hour in analysing and commenting upon some choice specimens of our old ballad

minstrelsy. He stated that when bringing the subject before the Society about a year ago he had only a very slender stock of ballads in his wallet, but since then he had increased it to upwards of sixty; and the more he read of these ancient lays the more was he charmed with their simplicity, their pathos, their mingled force and tenderness, and their poetical beauty. Some of these new studies of old ballads he would now lay before them. As on the first occasion he had explained the manner in which they had been produced and their leading characteristics, he would not now occupy time by travelling over the same ground. After a few more preliminary remarks, Mr M'Dowall presented seven studies *seriatim*, the ballads selected being Edom o' Gordon, Johnnie of Breadislec, The Gay Goss-hawk, Jamie Telfer, Kinmount Willie, and The Marchioness of Douglas.

2nd of March, 1888.

Major BOWDEN, V.P., presided. Thirty-five members present.

New Members.—Mr Thomas Fraser, Dalbeattie, and Mr William M. Wright of Charnwood.

Donations.—Mr James Barbour presented a wooden plate with the initials J. F. and the date 1715, which belonged to a John Frood of Blackshaw, Caerlaverock; also a saucer with the initials M.D., 1752. The Rev. R. W. Weir presented the communion tokens of Closeburn, Dunscore, Greyfriars (Dumfries), Tinwald, and Trailflat. The Secretary presented from Dr Sharp an address read to the Entomological Society of London, and a copy of a pamphlet on *Insecta*; also nine parts of the Journal of the Linnean Society from Mr W. D. Robinson-Douglas, the 21st Report of the Peabody Museum, and the Transactions of the New York Academy of Sciences.

COMMUNICATIONS.

- I. *The Roman Baths of Aquæ Salis, Bath.* By Mr JAMES W. WHITELAW, Solicitor.

After apologising for choosing a subject not strictly within the lines of the Society, Mr Whitelaw went on to describe Bath and its history, dwelling upon the time of the Romans and the various traditions connected with it. He pointed out that there were evidences of the Roman Baths having been used for a long

time after the Roman legions left. Mr Whitelaw then went on to describe the baths, and in conclusion said they were a splendid memorial left by these old Romans, not only of the comfort, luxury, and splendour which they brought with them into this remote part of their dominions, but of that solid, all-enduring, time-defying work which they did, and which was emblematic of the indomitable courage and perseverance which subdued the whole of the then known world.

II. *The Old Church of Dumfries.* By Mr JAMES BARBOUR.

St. Michael's Church is still sometimes called "the Old Church," but the title was first and properly applied to the building which preceded the present one, after the New Church, now Greyfriars', was founded in the year 1727. It is the form and character of this earlier building, of which very little is known, although not quite one hundred and fifty years have elapsed since it was taken down, I propose endeavouring to elucidate in this paper. The site of the church is a conspicuous one, and with an outline showing that peculiar kind of eminence which is suggestive of the idea that it may have been a "high place" of heathen worship, afterwards appropriated to its present use when, under the influence of Christianity, such worship had ceased. This at least is the most ancient religious foundation in the town of which there is authentic record, receiving mention as early as the middle of the twelfth century, more than one hundred years before the founding of Greyfriars' Monastery by Devorgilla. It has no doubt continued uninterruptedly to be a place of public worship ever since. Dedicated to the Archangel Michael, the patron of the Burgh, whose image the official seal bears, it and the old Castle which stood near were doubtless the two institutions under whose protecting shadow and fostering care the town was first planted and reared. Here the citizens worshipped, and in the small cemetery around, the only one existing in the town until quite recently, all their past generations are laid.

Recently when repairs were being made on the existing building remains of old foundations were exposed, and some fragments of stones believed to be parts of the older church. Having these to start with, and wishing to follow out the subject, I examined the Records of various bodies likely to contain information, and fortunately found in those of the Presbytery, engrossed *in extenso*, the reports of tradesmen to whom remit had been made

in the year 1744, while the Old Church was yet standing, to enquire into the condition of the fabric. These reports furnish important and reliable information, from which, when supplemented from other sources and considered in connection with the foundations and other remains brought to light, may be obtained a fairly complete idea of the design of the Old Church.

The church had long been in a state of dilapidation, and from time to time complaints were made, followed by ineffectual attempts to put the building in order, but it was evidently worn out and ruinous. At last several families removed from it and declined to worship there owing to its unsafe state. In these circumstances the Presbytery was called in, and on the 22nd March, 1744, that reverend court held a visitation at the church, when a remit was made to tradesmen in the following terms: "To inspect the state of the church as to the walls, roof and windows, according to their respective crafts, and bring in against the afternoon a just report of the state and condition of the church as to these particulars, and what articles and pieces of reparation would be needful for putting the same in good and sufficient condition, as also to make up an estimate of the expense at which the needful reparation might be wrought and completed." It will be observed that the terms of the remit would exclude the reporters suggesting that a new church ought to be built, and accordingly, although reparation of the old one would practically mean renewal, they proceeded in these reports to describe in detail one portion of it after another as insufficient and to be re-built, until nearly every several feature of the old church receives mention, rendering the reports much more valuable for our purpose than they would otherwise have been.

From these sources I proceed with the description of the Old Church as it stood in the year 1744, immediately before its demolition, in order to make room for the existing one. It comprised three divisions, frequently referred to in the reports on which we are drawing, the central one being described as "the body of the kirk," and the other two as "the two side aisles." "Middle walls" are mentioned as separating the aisles from the body of the kirk, and supporting the roof. These rested on arcades of three bays, each with a fourth bay on each side, not arched over. The pillars were six in number, with four half ones at the wall, giving four bays to each arcade, but only six arches are mentioned, not eight, as the number of spaces would require.

The discrepancy is accounted for by supposing the design of the church to have been originally cruciform, in which case the bays without arches would represent the joinings of the transepts at the crossings. The side walls of the aisles, which were finished with "cornices" and "rustic corners," were of equal height with the middle walls; and the roof was a triple one, being described as consisting of "the middle roof," which covered the body of the kirk, and "the two side roofs," which covered the aisles. In the east end of the body of the kirk, which was a gable, were two large windows, and there was a doorway in its west wall. Besides the west doorway there were four others, two being in the south wall and two in the north one; and in each of the aisles there were four windows, one being in the east end, two in the side wall, and one in the west end. One of the west windows is described as a large Venetian window of one hundred and seventeen lozenges. Admission of additional light was provided for by means of skylights placed in the roof.

The foundations of the Old Church, *in situ*, determine the position and extent of the central division or "body of the kirk," and its two sides and east end would correspond with those of the central division of the existing church respectively, but its west end was four feet short of the existing west wall. They also show that the arcades stopped short of extending up to the east end of the building. Other remains indicate that some of the pillars were octagonal, that the arch-rings were chamfered, and that the gable was of a high pitch and finished with a chamfered skew-stone, having a cross on the apex.

Attached to the west end of the church was a thick short tower, the room within which was known as the "Session" or "Session-house." Subscriptions were raised in the year 1740 for "the raising and exalting of the Old Kirk steeple to bear some resemblance to other spires," as it is expressed in a minute of the Seven Trades, but the walls proving to be insufficient, the tower, instead of being raised, was taken down, when the existing spire was erected on the same site, against the end of the old church.

Passing to the consideration of the interior fittings of the church, of which we have some early glimpses in the Kirk-Session books, and a very full "Abbreviate of the Minutes of the Committee of the Town Council, Heritors, and Kirk-Session of Dumfries, appointed by them to regulate the seats in the said church," in the year 1695. On 12th April of that year it was appointed "that

the chairs and stools in the body of the kirk be removed, and their room filled up with convenient seats (but movable), which are to be built by the Session and farmed out as they see convenient." This, however, was not the first time the church had been fitted with seats. The committee appointed on this occasion required parties to produce their titles to such seats as they might lay claim to; and many of them claimed possession from much earlier dates. Two claims were founded on titles reaching back to 1624, several referred to the year 1636, a few to 1661, and a large number founded on an allocation made in the year 1682. The Session claimed to have regulated the seats in the church "from the time of the first Reformation."

Such fixed seats as existed prior to the year 1637 appear to have been built by the occupiers, the Session giving consent, in consideration of payments to them for behoof of the poor. On 5th July of that year the Session instructed the partial seating of the church, as their minute bears: "It is enacted by the Session ye betwext ye two pillars over against the minister's pulpit" (the body of the kirk) "Desks be erected, one chiefly for ye use of John George Homes, and likewise for the honest men and best burden bearers." The seating seems to have undergone from time to time many changes, and the church was never more than partially occupied with pews.

The pulpit, which had a sounding board, stood at the east end of the body of the church, and near it were the Reader's desk, the Elders' pew, and the Baptism pew. In the year 1695 the arrangement of the pews was in five columns, and they were numbered 1 to 79; but of their form there is no special mention.

In addition to the ordinary seats there stood round the walls others, the family pews of the larger Heritors, each built by its owner, and displaying a variety of design more or less quaint and ornate. Some were of considerable size, sufficient for 12 or 16 persons. They were raised somewhat above the level of the church floor, enclosed with railings, and roofed with canopies. Hoddam had permission to "adorn" his pew and heighten the cover of it; and mention is made of a pew bearing the initials of the owner's name and the date of its erection.

The minutes of 1695 relating to the regulation of the seats bear also on the history of the galleries. The Magistrates' Loft and the Merchant's occupied the front part of the West Gallery, and behind these, separated from them by a railing, was the

Common Loft. The Trades Galleries began to be erected in the year 1610. The Smiths, in support of their claim to their gallery, declared they once had an extract of an Act dated about the year 1612, allowing their trade to build their loft. The Wrights founded on an Act of Session, dated 4th August, 1636, which they produced, with others. The Weavers declared they had lately the extract of an Act granted by the Session in the year 1655. The Shoemakers produced an Act of Session dated the year of God 1613, likewise another of date 27th September, 1655. In regard to the Tailors' Loft, the following interesting old Act of Session was produced. The minute proceeds—"Adam Wright, Deacon of Taylors, produced ane Act of Session, dated the 9th day of Feby., 1610, which (the register not being now extant quherin it was) is here insert as follows :"

"The 9th day of Februarie, 1610, the Minister and Session being convenit in the Kirk of Drumfreis, the quhilk day George Lorimer, Deacon of the Tailzoris, in name and behalf of the remnant of that Craft, desyrit libertie to build ane Loft, for the use of the Tailzoris of Drumfreis in time of Divine Service, in that part of the Paroch Kirk of Drumfreis quhair lang befoir ye said Craft had obtaint libertie to build ane Alter of Saint Anna, as the warrant granted by the Counselle of the saide Burgh the yeir of God ane Thousand fyve hundred and fortie seven, therein producitt be the said George in parchment, at length purportes. To the quhilk desyre the Provost, Baillies, & Session fullie condescendit all in ane voyce without contradicitionne, providing allwais that the sd Loft come not further without the pillars within the bodie of the Kirk above the space of ane feet and ane half, or thairby, wn the quhilk boundis the first furme of the said Loft might stand, and no more."

For the Glovers it was alleged there were several Acts in their favour, and one extant in the Session Register dated 25th May, 1654. And the Fleshers founded their right on an Act of Session dated 17th March, 1659.

The lofts were not then arranged in the church continuously and symmetrically as now, but each stood by itself with its own stair. One is described as being supported on "three stoops," and that they were not regarded as integral parts of the building appears from the terms of a Minute of Session dated February, 1638. Absentee seatholders were not tolerated by the Session; their seats were liable to be taken down or otherwise disposed of;

and the galleries were not exempt from being similarly dealt with. The minute referred to runs: "The Session resenting and taking into their earnest consideration the slender resorting to the house of God by sundry tradesmen, but especially of Masons and Wrights, and they for that effect being convened, are admonished to repair to the kirk in tyme coming better than heretofore they have done, otherwise their Loft which is erected in the church will be taken down."

The Trades, like the Heritors, were not without some ambition to make a display in the church, inasmuch as they were accustomed to affix to the front of their lofts the emblematic devices of their several Crafts, so much so that the Session found it necessary to put some check on the practice, and on the 11th March, 1683, "enacted and ordained that no Trade put any broad (painting) or sign (emblematic) upon the forepart of their Loft, but ilk ane to be sighted and showed to the Sessione."

The only relic of the Old Church of 1744 preserved is one of these signs dated 1722, which had no doubt been duly "sighted and showed" to the Session. It consists of three wooden panels, which were until recently attached to the south wall of the present church behind the Squaremen's Gallery, and are now preserved in the Session-house. On one of the panels is displayed the numerous emblems of the Squaremen's Trade, artistically grouped together, and the following curious lines are inscribed on the other two:—

The · Ark · the · Church ·
 From · Final · Ruin · Savd ·
 When · God · on · Sinners' head
 The · Deluge · Lavd ·
 And · Tho · By · Virtue ·
 Of · this Art · of ours
 Proud · Babell · Lifted · up
 Her · Lofty · Towers ·
 Against · it · Solomon's ·
 Glorious · Temple · built,
 Where · God · the Vast Creation's
 Framer · dwelt ;
 Jesus · our · Cheif,
 The fabrick · once Renewed ·
 When · on · the · cursed · Tree ·
 His Blessed · head · He · Bowed ·
 His · Blood · the · shattered
 Works · of · God · Together · Glewd ·

Public exposure being a prevailing method of punishment, the church as a public place was fitted with the usual appliances for carrying into effect the sentences of the ecclesiastical courts, and also of the Civil Magistrate. "The seat of repentance" stood within, and the jongs and gorgets hung at the principal door, attached to the wall by chains. The first of these occupied at one time a place on the Common Loft, afterwards it was placed in the body of the kirk opposite the pulpit. That it was raised considerably above the church floor is evidenced by a minute of Session excusing a culprit going up to it on account of bodily infirmity. It is designated in the Session Records "the place of repentance," oftener perhaps "the pillar"—short for "pillory," which name occurs in full in a few instances.

After the Reformation a north wing was built, and other extensions and alterations followed from time to time, until only the nave and chancel remained of the pre-Reformation building, and the foregoing details exhibit the altered church and its accessories as an incongruous jumble, inartistic, uncomfortable, and inconvenient.

Its original form and character were different. The pre-Reformation Church comprised a nave, with aisles separated from it by arcades of three bays each and with the usual lean-to roof; also north and south transepts; and a chancel. Mention is made in the records of "the lean-to called the altar of St. John the Baptist." Other documents show that the windows were filled in with stained glass to St. Mary, St. Andrew, St. Christopher, &c. Many altars and chapelries were founded within the church. Mention is made of altars of the B.V. Mary, St. John the Baptist, St. Ninian, St. Andrew, &c., and of an altar erected by the Tailor Trade in the year 1547 and dedicated to St. Anna, the patron of that trade. The chapels were designated after their founders, and the areas occupied by them continued to be so named after the Reformation. Thus we have the M^cBrair aisle, the Newall aisle, the Cunningham aisle, and the Maxwell aisle. In this connection the following extract from the Minute of Committee on the regulation of the Seats in the year 1695 is of interest. Referring to a claim by Martin Newall to the second seat in the Newall aisle, the minute proceeds: "And because it is by several old charters and papers evidenced that the Newalls had a special interest in that part of the church these hundreds of years, therefore they allow this dask to Martin Newall and his posterity."

One pre-Reformation memento of the church remains, the bell gifted by the Lord of Torthorwald, preserved in the Observatory Museum. It is of elegant form and tasteful workmanship. The Latin inscription translated runs: "William de Carlell, Lord of Torthorwald, caused me to be made in honour of St. Michael, in the year of our Lord 1443."

At the time when the old foundations were uncovered five tombstones were also exposed within the church at the south-east corner, and the state of the soil under the floor showed that the practice of burial within the walls prevailed extensively until a comparatively recent period. The tombstones are imperfect, but on two of them portions of border inscriptions remain. One reads: "Heir · Lysis · James Couplan [d] . . . [Dumf]ries · 1665; and the other . . . "J. S. Johnstoun · Sumtym Thesar" . . . Documentary evidence of the custom referred to also exists. A draft agreement between the town of Dumfries and the heritors of the landward parish, drawn in the year 1709, states the object aimed at to be: "To prevent mistakes and pleas betwixt the town and the landward parish anent the division of the seats of the church of Dumfries, and the burial places in the church and churchyard." In the year 1744 the Session consulted Mr William Grant, advocate, as to their position with those heritors to whom they had sold seats in the church; and Mr Grant gave it as his opinion that any heritor of the parish who has acquired by this title of grant from the Session of a heritable or perpetual right to a seat or burial place in the church his title is good. On the 21st Jan., 1714, the treasurer received two guineas from Geo. Gordon of Grange "for the liberty of his father's corps lying in the Session [house];" and in the year 1721, Mr Veitch was granted a burial place within the church for himself and his wife. The two following instances of this custom are of some interest. In the *Memorials of St. Michael's* Mr M'Dowall remarks on the absence in the churchyard of any monument in memory of the great family of M'Brair. The explanation of the omission is to be found in the fact that the family burial place was situated within the church. A minute of Session, dated 8th Nov., 1705, after narrating that Robert M'Brair of Netherwood is allowed to erect a seat for twelve or sixteen persons in the M'Brair Aisle, proceeds, "and finally the Session consents to the preserving of his right of burial place in the said isle as has been in use and wont by his predecessors;" and on 8th June, 1747, after the present church was built, the Provost reported "that the

Council had been summoned before the Lords of Session at the instance of the widow and children of Alexander M'Brair of Netherwood anent a burial place in St. Michael's Church, and that it would be proper an agent for the town should be appointed." The second instance is that of James Muirhead, in reference to whom Mr M'Dowall says, when speaking of his wife's tomb, "We cannot tell whether or not 'James Muirhead, late baylie of this burgh,' lies beside his spouse, as the inscription only mentions him in his married relationship to her; but if it could be found out by any means that the philanthropist was buried here or elsewhere in Dumfries, a stone erected to mark the hallowed spot would be a graceful, even though a tardy tribute to his great worth." James Moorhead was also buried within the church, although at what particular spot I cannot say. The following interesting Town Council minute, dated 18th March, 1745, bears on the subject, and its terms are in unison with Mr M'Dowall's sentiments: "The said day the Magistrates and Council, considering that the deceased James Moorhead, in Castledykes, made a handsome mortification for a Poorhouse in this burgh, and that the old church is now rebuilding, and that a part of the wall thereof is carried up near to the grave where the said James was interred in the said church, the Magistrates and Council are of opinion that a monument should be erected upon the said wall in memory of the said James Moorhead, and appoint a committee of the Magistrates, Provost Crosbie, Provost Ewart, Mr George Clerk Maxwell, the convener, and a deacon, whereof three a quorum, to consider of a proper monument to be erected in memory of the said James Moorhead, and to make an estimate thereof, and report the same to the Council."

With a few remarks on the existing Church and the origin of its design I will conclude the paper.

The spire was built, as before stated, in the year 1740, while the old church was yet standing; and although the details are crude its excellent proportions give artistic value, and make it a feature of the town to be held in regard.

The interior of the church is still more worthy of admiration. Unique as a Presbyterian place of worship with its massive and stately stone pillars and arches and over walling, separating the side aisles from the central area, one is curious to know something of the origin of such a design.

On the Old Church being condemned by the Presbytery, the Town Council obtained from Mr Adam, the celebrated architect,

a plan for a new building, but, being too expensive, one prepared by the tradesmen, on whose reports the reverend court acted, was preferred, and Mr M'Diarmid has suggested, in accounting for the elegance of the church, that the design must have been partly borrowed from Mr Adam's plan. A careful perusal of the process before the Presbytery and of the proceedings of the Town Council in the matter will, I think, lead to the conclusion that another and more likely explanation is to be found.

Estimates submitted to the Presbytery along with the reports on the reparation of the Old Church had been approved, and on the amount brought out, the proportion to be paid by the landward heritors had been arranged. Being thus restricted, the Council, on Mr Adam's plan proving too expensive, arranged one with the tradesmen on the lines of their reports and estimates, but with such modifications as the new conditions seemed to require. In this way the design originated and grew out of the form of the Old Church. The ground plan almost exactly follows the old one; the central division corresponds in position and width with the old chancel and nave, as do the aisles with those preceding; and the most prominent feature, viz., the arcades, a pre-Reformation characteristic, is also carried forward from the old church. Even the number of the pillars and half pillars agree, and the roof, although of pavilion form, was intended to be triple like the old one, the arcades being built for its support; but a change was afterwards arranged, as, according to a minute of Council dated 25th June, 1745, it was agreed on the suggestion of the tradesmen to alter the plan, and, instead of three roofs, to adopt a design of one span, with a platform on the top, which the tradesmen represented would be as sufficient and much more beautiful. The pulpit now occupies exactly the place where the ancient altar stood.

III. *A Bronze Ewer Found near Moniaive.* By Mr JOHN CORRIE of Moniaive.

The brass tripod ewer was found during May, 1885, by a drainer employed on the lands of Craigmuir, an estate on the boundary line between Dumfriesshire and Kirkeudbrightshire. The soil in the vicinity is of the character of moss, and the ewer was found embedded therein at a depth of about three feet from the surface. The broken foot was found lying close beside. Mr Thos. Conchie, mole-catcher, Moniaive, noticing the strange shaped

vessel lying on the bank, asked and obtained possession of it, and the relic was presented to me by Mr Conchie the same night.

The vessel measures $8\frac{5}{8}$ inches in height, by $2\frac{1}{2}$ inches across the mouth, while the body expands to $5\frac{1}{2}$ inches diameter. The legs measure 2 inches in length, and they are turned outwards at the end, forming small feet about three-quarters of an inch in length. The spout appears to be hexagonal in form, and tapers slightly to the mouth, where it has been worked into what may be considered a rude representation of an animal's head. By the kindness of Mr Wilson a rough sketch of the vessel, which I made at his request, was submitted to the experts in charge of the National Collection at Edinburgh, and Mr Black, who replied to Mr Wilson at some length, says: "The Moniaive vessel is a typical one of a class in use between the twelfth and sixteenth centuries. There is hardly any difference in their general shape. Their usual dimensions are about 9 inches in height by from 5 to 6 inches in diameter in the widest part, narrowing to about 3×3 across the mouth. There are in all twenty-one vessels of this class in the National Collection in a more or less perfect state of preservation. Of these, two are from Dumfriesshire, one from Birrens, Annandale, the other found in a moss near Closeburn Hall, was presented to the National Collection in 1830 by Mr (afterwards Sir) C. G. S. Menteith. This specimen is in the shape of an ordinary jug, the spout not being separated from the body of the vessel. It may be mentioned, he continues, that a brass tripod was found on the site of the Lake-dwelling in the Loch of Banchory, Kirkcudbrightshire, and another on a Lake-dwelling site in Loch Canmor, Aberdeenshire. This would lead one to suppose that they must be of great age, but, he adds, it does not follow, as we know that Lake-dwellings were used as places of residence and defence down to the sixteenth century."

6th of April.

Major BOWDEN, V.P., presided. Thirty-seven members present.

New Members.—Miss Hannay and Miss J. Hannay, Victoria Terrace.

Donations.—The Annual Report of the British Association; the Essex Naturalist for February; a Photograph of the Cup and Ring Markings at Highbanks, Kirkcudbright, from Mr J. M'Kie;

a Photograph of the Shark exhibited by Mr Hastings at the November meeting ; Tokens of Kirkmahoe Parish from Mr W. G. Gibson ; a Wasp's Nest from Mr Hume of Cherrytrees. Mr J. W. Dods presented a Roman Coin found in Egypt by one of the soldiers during the recent campaign.

COMMUNICATIONS.

- I. *The Kirkmadrine Crosses.* By Mr JAMES G. H. STARKE, M.A., F.S.A., of Troqueer Holm.

The Kirkmadrine Crosses have never been the subject of a paper before this Society, and as I went to see them last summer it occurred to me that you might be glad to have an account of their history, characteristics, and present condition. They were first brought to public notice in 1872 by a paper read before the Scottish Society of Antiquaries in Edinburgh by Dr Mitchell, who had accidentally discovered and examined them with the skill of a scientist some years previously. They are the oldest and only monuments of their kind in Scotland with the exception of one other, also situated in Wigtownshire, near to Whithorn. But they are fast going to destruction, and one of my objects this evening is to awaken the interest which has too long slumbered regarding them, in order that something may be done for their better preservation in future.

There are hundreds of monoliths with crosses incised upon them scattered throughout Great Britain, but only about half-a-dozen similar to those at Kirkmadrine, in having the sacred monogram of Christ upon them, and in peculiar characteristics which enable us to determine their date as being not later than the 7th century. The Rhind Lectures, delivered by Dr Anderson in 1879-80, and by Mr Romilly Allen in 1885 (since published) satisfy the mind of the most exacting student that these Kirkmadrine Crosses, as they are called, belong to a very early date after the introduction of Christianity into Scotland, not later, they believe, than the 7th century. They are probably older than the Ruthwell Cross, which, with its beautiful ornamentation and poetic lines from Caedmon, speak of an advanced art and literature derived from the teaching of Paulinus in Northumberland A.D. 625, while these Kirkmadrine crosses display a simpler and earlier style, derived from Rome through Gaul by St. Ninian and his followers. I may here mention that Kirkmadrine was one of several small parishes long ago merged in the modern parish of Stoneykirk, the

churches of which were chapels of ease in ancient times to the famous monastery at Whithorn. It is pronounced by the country folks *Kirkmadreen*, according to the Scotch pronunciation of the letter *z*.

And now I proceed briefly to describe the characteristics of pillar-stones, and in what respect these are distinguished from others. Pillar-stones are generally sepulchral, but sometimes they mark sacred boundaries, or are commemorative only of persons, or, as in the Ruthwell Cross, have been erected as a sign and memorial of the Crucifixion, and any name inscribed, *e. g.*, "Caedmon made me," being of secondary importance. These are probably sepulchral. Of the three stones, the two which serve as gate posts are about 5 ft. in height and between 1 ft. and $1\frac{1}{2}$ ft. in breadth. On the top of one are inscribed the first and last letters of the Greek alphabet, and on both of them are incised a simple Greek Cross, the limbs of which gradually expand in breadth towards their extremities; the perpendicular limb being turned to the right at its top, so as to make the Greek capital letter P, which, when thus united with the cross, constitutes the sacred monogram. On the third stone, which was seen and copied by Mr Todd 75 years ago, there was a similar shaped cross and monogram at the top, and at the foot, in Latin capital letters, the words *Initium et Finis*, to correspond and explain the Greek letters on No. 1. It is the sacred monogram, called the Chi-Rho Monogram, which give these stones their peculiar significance. The Chi-Rho Monogram is composed of two Greek letters, the former of which is similar to our St. Andrew's Cross; and the Rho is like our letter P. By swinging round one limb of the Greek letter X so as to place it at right angles with the other limb, we have the Latin form of a cross, which has either the one limb put exactly across the other limb or a little upwards. This Latin form of the Greek Chi-Rho Monogram soon spread from Rome to other countries, and is found upon monuments in Gaul A.D. 377. It is the chief characteristic of these Kirkmadrine Crosses. It is only found upon the very early pillar-stones. There are very few examples of it upon stone monuments throughout Great Britain, there being only 3 in the west of England, 1 in North Wales, 4 in Scotland (Co. Wigtown), and *none* in Ireland.—Allen's E.C.Sy. pp. 86-113.

The Kirkmadrine Crosses have these further special characteristics, *viz.*, that they are rough undressed pillar-stones, without

ornamentation, and that the sacred monogram is placed *within* a circle. And further, although of less consideration, the formula employed in the inscription and the style of lettering materially differs from all those of a later date. These characteristics stamp the Kirkmadrine Crosses as contemporary with the earliest period of Christianity in Scotland, *i.e.*, between A.D. 400-700. Mr Romilly Allen says: "The monograms on the pillars at Kirkmadrine bear a great resemblance to those sculptured over the doorways of houses in Syria of the 6th century, which are illustrated in Mon. de Voguel's magnificent work on this subject." In regard to the inscription and style of lettering we have further evidence of great antiquity. In English the inscription is:—

I am Alpha and Omega.
 Here lie holy and chief priests—
 That is Viventius and Mavorius :
 —us and Florentius.
 I am the Beginning and the End.

The words *Hic Jacet* and *Hic Dormit* are those used in the Catacombs of Rome, and at a later time throughout Gaul. They were subsequently quite superseded by a request for prayer for the soul of the deceased, *Ora pro me*. The style of the letters R. M. F. and the occasional combination of two letters, resemble some stones in Wales which are ascribed in the *Archæologia Cambrensis* to the Romano-British period. Lastly, let me endeavour to give a probable answer to the natural enquiry, To whom were these stones erected? In the fact that their names have not come down to us in history, we have an additional adminicule of evidence in favour of their antiquity, because in early times monuments were not raised to obscure individuals. It should also be kept in mind that until the life of Queen Margaret A.D. 1093, we possess only fragments of authentic Scottish history in Bede, Adamnan, the Irish and Welsh Annals, Northern Sagas, and Pictish Chronicles. The following is an interesting extract from the Ecclesiastical History of the Venerable Bede, who died in 735, regarding the district now under consideration. He writes: "The Southern Picts had long ago forsaken the errors of idolatry, and received the true faith by the preaching of Ninias, a most holy man, who had been regularly instructed at Rome, whose Episcopal See, remarkable for a Church dedicated to St. Martin of Tours (wherein he and many other Saints rest in the body) is still existent."

The names inscribed in these Kirkmadrine Crosses resemble those upon Christian graves in Gaul. We know that Ninian went

to Rome through Gaul, which was the overland route to Rome, and that he got masons from Tours to build Candida Casa. But it is reasonable to suppose that after St. Ninian's death Candida Casa would be sacred to his memory alone, and that Kirkmadrine would be named after St. Martin of Tours, to whose memory the holy men named upon these pillar-stones performed services. That district is studded over with the prefix of "Kirk," which is Anglo-Saxon, and the same dialect would harden the name Martin to Madrine. There is no *K* in the Gaelic, but *C* spelled sometimes *K*, as in Kilbride, Innokill; and later the Norman-French *Eaglais* for *Eglise* occur in this district for the word Church instead of Kirk. It has been suggested that they may have been Irish ecclesiastics, but all the facts are against this theory. There are *no* pillar-stones like them in all Ireland; and the Greek letters and Monogram, together with the Latin inscription, point to a Byzantine-Roman influence succeeding, if not contemporary with, the 4th century, when Constantine was converted to Christianity. If I have reasonably established this I shall have succeeded in the main object of this paper.

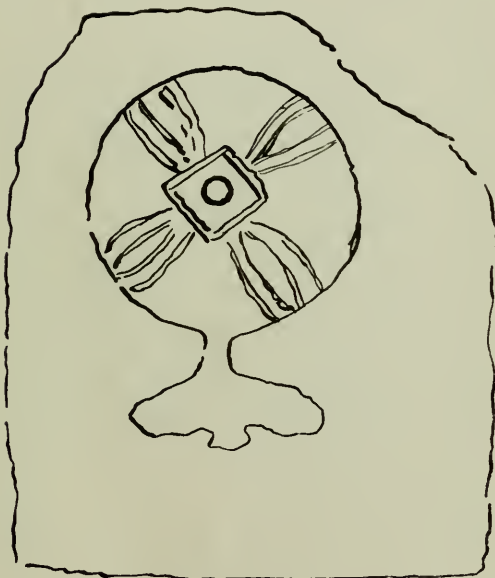
II. *The Oak and Other Trees.* By MR FRANK MILLER of Annan.

Mr F. Miller, Annan, read an able paper, rendered more attractive by copious poetical extracts, on the subject of the "Oak and other Trees." He dealt first with the extraordinary longevity of the oak, stating that oaks were still standing in this country which were planted as acorns before the last of the Roman legions left these shores. He then vividly depicted the reverence with which the Druids regarded the tree, and the observances associated with it in Druidical times, and also treated of the many historical associations which had since centred round it. The oak had also proved its practical value, the strength and durability of its timber specially fitting it for naval purposes in the days when "the wooden walls of old England" were renowned all over the world, and making it valuable for architectural uses in the present time. Among large oaks, Mr Miller mentioned several majestic trees in Scotland, specifying particularly two at Drumlanrig, which had escaped the mania for destruction of the late Duke of Queensberry, and two on the Eskdale estate of the Duke of Buccleuch. Mr Miller then dealt at some length, and in an interesting fashion, with the characteristics of the beech, the ash, and the yew, and the poetical associations connected with them.

OLD INSCRIPTIONS & CROSSES IN KIRKMADRINE CHURCHYARD
(COPIED BY W. J. ON 31ST MAY, 1887.)
THE STONE IS SANDSTONE & SPOTTED WITH LICHEN.

I

STONE IN WALL ADJACENT TO ONE OF THE GATE POSTS
APPARENTLY UPSIDE DOWN.

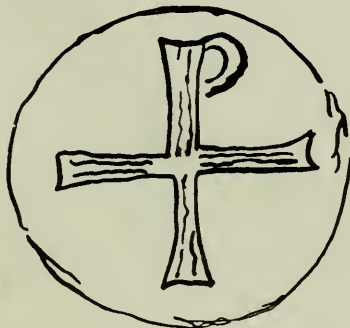


EVIDENTLY THERE HAVE BEEN LETTERS IN THE
4 BLANK SPACES OF THE CROSS.



II, MONUMENT SERVING NOW AS GATE-POST
FOR THE CHURCHYARD

LEFT GATE-POST.



HIC JACENT
SCI ET PRAE
CIP VISACER
DOTES IDE ~
VIVENTIVS
ET MAJORIVS

CIRCLE 14 INCHES IN DIAMETER
INSCRIPTION TAKES UP 15½ INCHES IN DEPTH
12½ INCHES BROAD
FULL BREADTH OF STONE IS 16½ INCHES
HEIGHT OF STONE FROM GROUND 4 FEET, 4 INCHES
SIZE OF LETTERS 2 INCHES BUT A LITTLE VARYING



III, MONUMENT SERVING NOW AS GATE-POST
FOR THE CHURCHYARD

RIGHT GATE-POST.



CIRCLE $9\frac{1}{2}$ INCHES IN DIAMETER
INSCRIPTION TAKES UP ABOUT $9\frac{1}{2}$ INCHES IN DEPTH
10 INCHES BROAD
FULL BREADTH OF STONE ABOUT 1 FOOT
HEIGHT OF STONE FROM GROUND 5 FEET
HEIGHT OF LETTERS $2\frac{1}{2}$ INCHES

IV
STONE IN MIDDLE OF WALL AT THE
S.W. ANGLE OF CHURCHYARD.



LYING HORIZONTALLY, ABOUT 9 INCHES IN BREADTH,
LENGTH EXACTLY 3 FEET.



III. *Buittle Old Church.* By Mr JAMES MATTHEWSON,
Dalbeattie.

The brief notes here contributed are intended as a small aid to the solution of the question, "Is Buittle Church of the time of Devorgilla?" In ground plan the church measures 80 ft. 10 in. in length by 25 ft. 4 in. in greatest width. The nave measures 46 ft. in length by 21 ft. 8 in. wide; the chancel, 34 ft. 10 in. long by 25 ft. 4 in. wide. The west door is circular-headed, 3 ft. $2\frac{3}{4}$ in. wide, a plain 2 in. chamfer running round the outside, checked at $8\frac{3}{4}$ inches inwardly, and thereafter slightly splayed. Over this door is a small round-headed window measuring 3 ft. 8 in. by 1 ft. 8 in. Two windows remain in the nave, one in the north, the other in the south wall. Between the nave and chancel a pointed chancel arch still stands. The clear width of passage measures 9 ft. 6 inches. The plan of the pier below the caps and profile of caps are here given full size; but an evident filling up of the floor prevents a proper examination of the bases. In the chancel one window appears in the north wall and two in the south. The north window measures 3 ft. $11\frac{3}{4}$ in. high by $11\frac{1}{2}$ in. wide. It is round-headed, and the interior elevation, as shown in the sketch, is worthy of notice. In the east gable is a door 3 ft. $2\frac{1}{4}$ in. wide, covered by a thin lintel, which forms the sill of a centre window. This window measures 8 ft. high by $14\frac{1}{4}$ in. wide. At a distance of 3 ft. 11 in. on either side stand windows 6 ft. 8 in. high by $11\frac{3}{4}$ wide. The three east windows are all round-headed, and finished externally by a plain chamfer. In the north wall, at the junction of the nave and chancel, and near the present floor level, I some time ago found, bedded in the old mortar, a portion of roofing slate. The slate had a pin hole, and had been well dressed. It had apparently been used by some of the builders as a levelling for the bed of the stone immediately above. Some of the stone dressings are a reddish freestone, others resemble millstone grit. In some parts of the building both kinds appear indiscriminately mixed. The perfect condition of the present pointed arch between nave and chancel, the jumble of materials in some places, the broken slate, and other features, seem to suggest that a much older church may have existed on or near the site of the present one, and that the present building is much later than Devorgilla.

IV. *The Old Cornkilns at Barclosh, Kirkgunzcon.* By Mr
WM. J. MAXWELL of Terregles Banks.

On the Farm of Barclosh, near Southwick Station, there are a number of circular pits which have recently attracted notice, and although two of them are marked on the Ordnance Survey map as Old Kilns, it was thought desirable that one should be cleared out so as to ascertain more exactly its construction and purpose. The result of this investigation is to shew that the structures in question are old kilns, and that they have probably been used for drying grain before grinding it in the hand-mills or querns formerly in use. The one recently cleared out was found to be 6 ft. 6 in. in depth, 13 ft. in diameter at the top, and regularly contracting to a diameter of 4 ft. 6 in. at the bottom. Like the others on the same farm it is circular, situated on the slope of a hill and firmly built with rough stone, without lime. It has a smooth compact floor of clay. At the bottom is an aperture resembling a pen or drain, 18 in. in width by 15 in. in height. Two stones project from the circular wall towards the inside, apparently to serve as steps in climbing out. At the side on which the ground is highest there remain the foundations of a rectangular building $13\frac{1}{2}$ in. by $10\frac{1}{2}$ in. inside measurement. This building is not sunk below the surface of the ground, and may have been used for storing the grain before or after the drying process. This kiln is about 90 yards to the south-east of Barclosh farm-steading, and about 40 yards from the road leading past it. 286 yards further south, and 55 yards on the other side of the parish road, there is another kiln of similar construction and dimensions. About 190 yards to the south-west of that last mentioned and close to the parish road, there is a third, and in the copse or young plantation adjoining, a fourth kiln—the last two of somewhat smaller size and without the rectangular building observed in connection with the first two.

It seems remarkable that so many of these kilns should be found so near together, but the remains of other buildings show that numerous dwellings have at one time existed at this place. Here and there throughout the copse and rough ground adjoining may be noticed curious mounds and cairns, which may perhaps be natural, or thrown up in clearing the ground for tillage, but which may, on the other hand, indicate ancient burial-places. In Sir Herbert Maxwell's work, I believe he translates Barclosh as meaning the Hill of the Trench, Pit, or Grave.

15th April, 1888.

At a meeting of the Council at which Mr ROBERT MURRAY, V.P., presided, the Secretary submitted the following letter from the Rev. R. H. Taylor, M.D., to the Rev. Robert W. Weir :

LIVERPOOL, 1 PERCY STREET,
April 14, 1888.

DEAR SIR,

Will you oblige me by being the medium of conveying to the "Dumfries and Galloway Natural History and Antiquarian Society" the gifts which I now send of the MS. History of the Parish and Town of Dumfries, written by my grandfather, the Rev. William Burnside, D.D., formerly minister of St. Michael's Church.

The conditions on which I bestow the volume are simply these :

1. That I may have an exact copy of the same.
2. That the volume may be open to the inspection of all who wish to see it, subject to the rules of the society.
3. That in the event of the society being dissolved, the MS. may be given to the Museum at present contained in the Observatory on the Corberry Hill, in the Parish of Troqueer.

It affords me much pleasure to hand over this interesting narrative to those who I know will appreciate it, and doing so will be careful to preserve it.

Be so good as apprise me of the safe arrival of the volume.

I am,

Very sincerely yours,

R. H. TAYLOR.

REV. R. W. WEIR.

The thanks of the Council were awarded to Dr Taylor for his present, and to the Rev. Robert W. Weir for being the means of procuring this valuable document.

Field Meeting. 5th of May.

The first excursion for the season took place on the 5th May, when a small party inspected several objects of interest on the farm of Barclosh, Kirkgunzeon, under the guidance of Mr W. J. Maxwell, Terregles Banks, and Mr Wellwood Maxwell of Kirkennan. A portion of the walls of Barclosh Tower is still standing, although in a very decayed condition, adjacent to the farm-house. The walls are over three feet in thickness, and it is evident that the place has been one of considerable strength. Scarcely an indication remains of the existence of the castle, of which it formed

a part, and which was one of the principal seats of Lord Herries at the time of Queen Mary.

The party next inspected the old corn kilns, respecting which an interesting discussion took place at the last meeting of the Society, but despite much earnest investigation no fresh facts were elicited regarding them. It may be noted, however, that the remains of buildings are always to be found near these kilns, and the conclusion is therefore irresistible that a considerable population was at one time maintained on what now appears a stretch of the most unpromising pasture land in the Stewartry.

The party next proceeded to Barcosh Outer Hill, where much speculation was indulged in regarding a large number of cairns of stones which have been built, without much apparent design, at irregular intervals all over the hill. It was suggested by some members of the party that these cairns were erected by the Celts to mark places of sepulchre; but a more prosaic section contended that the ground had merely been cleared for purposes of pasturage, and no carts being available in those days to transport the stones to a distance, they had been collected in this way.

The usual monthly meeting was held in course of the afternoon, Mr W. J. Maxwell presiding. The Secretary intimated the following additions to the library since last meeting: The Proceedings of the Society of Antiquaries, 1886-87; of the Berwickshire Naturalists' Club (two parts); the Belfast Naturalists' Field Club; the New York Academy of Sciences; and from the Smithsonian Institution, a Bibliography of the Eskimo Language; Perforated Stones from California; Work in Mound Exploration; and a Bibliography of the Sionan Language. Also two monographs—one on the salt mines of Hallein, and the other on an Excursion to the Hospice of Great St. Bernard by the author, Dr R. H. Taylor.

Field Meeting. 2nd of June.

Owing to the heavy rain no excursion was made. Dr Taylor, of Liverpool was elected on honorary member on the recommendation of the Council.

A meeting of Council was held on the 29th June, at which Mr Joseph Wilson resigned the honorary secretaryship, on his

removal to Fifeshire. On the motion of Major Bowden, Mr Wilson was heartily thanked for his services as secretary, Messrs Watson and Murray making complimentary remarks upon the value of his exertions on behalf of the Society. Mr Robert Barbour was elected secretary till the end of the current session. The Council agreed to present a gold watch to Mr Wilson as a testimonial in recognition of his labours as secretary. This presentation was made on the 5th of July at a meeting of the Society specially summoned for the purpose.

Field Meeting. 7th of July.

A party of twenty-six members from Dumfries, who were joined on the way by Dr Grierson, president of the Society, and several members from Sanquhar, making thirty-five in all, had a circular drive on Saturday, 7th July, from Thornhill, proceeding up the Valley of the Nith and Mennock Pass to Wanlockhead and Leadhills, and returning by way of the Elvan and Dalveen Passes. On the way up Mennock, a halt was made at a spot called the Pangrains, to inspect two little grass-grown grounds, intersecting each other in form of a cross, supposed to mark the site of an ancient place of worship. The shaft of the cross is twelve yards in length; the arms each measures seven yards. At Wanlockhead the party were conducted by Mr Peter Stewart, resident manager of the Lead Mines, through the crushing, washing, and smelting works, the various processes being explained to them, and Dr Wilson, of Wanlockhead, pointing out the various minerals found along with the galena. They had also explained to them the methods employed in desilverising the ore (according to Pattinson's patent) and extracting litharge. At Leadhills the President obtained from one of the miners a few grains of native gold, and several of the members procured samples of different minerals from the lead mines.

Field Meeting. 8th of September.

The last field meeting of the session was held on Saturday, 8th September, when a party of thirteen left the Fountain by waggonette, at 9.30 A.M. They first visited Springfield Camp, near Dunscore, where they were joined by the Rev. Mr Simpson and Dr Callander. The latter undertook to act as conductor, and

pointed out the peculiarities of the camp. The camp is an interesting one. It occupies the summit of a span of Springfield Hill, and near by is a spring of water, from which its name is probably derived. The position is one of great strength, and it commands a most extensive prospect. Burnswark is in view; and the spectator overlooks the whole valley of the Nith downwards, and Glenesslin valley and a considerable part of the valley of the Cairn upwards.

Proceeding by way of Dunscore village, Dalgonar Bridge, and Glenesslin to Sundaywell, the fine single-span bridge over the Cairn at Dalgonar Mill and the beautiful glen below were noted. Further on, Collieston, the ancient lairdship of the Welshes, was pointed out, and Chapel, deriving its name from a small church which stood there, and of which only one stone is now to be seen. Arriving at Sundaywell, the old tower was examined. The building is now so much modernised that little of its ancient character is left. A panel over the door bears a shield, above which are the initials I.K.S.W. [J. Kirk, S. Welsh?], and below the date 1651. Sundaywell Camp, which is little known, was the next object of attention. It lies at the base of Bogrie Hill on a natural mound. It is somewhat larger than Springfield, measuring about 120 yards by 70; but the two camps resemble each other to a remarkable degree, and although more than five miles apart in a hilly country, they are visible one from the other.

Proceeding to Bogrie Tower, the oak fern was found in abundance in the glen of the burn. The tower which stood here was removed several years ago, but the remaining dwelling-house is of considerable age, and possesses some points of interest. In its walls and in those of the offices are a large number of moulded stones which belonged to the Old Tower, and they indicate that the building has been one of some importance and with characteristic features. There is a panel inscribed with the initials IK-IM and the date 1660. A small circular camp at Bogrie Hill was also visited.

The return journey was made by way of the Glen of Lag, and the remains of Lag Tower were examined with interest. Of it the late Charles Kirkpatrick Sharpe says: "I think I never saw so rude a ruin as the tower of Lag, in the glen of that name. The stones appear to have been taken out of the burn, and made walls of, without the help of pickaxe or chisel—not a tree, or anything like one, to be seen—nothing but huge round stones, and stunted

whin bushes, and a scanty rivulet flowing between the solitary braes. Things, however, may now be changed, for it is more than 20 years since I visited the Glen of Lag." No change is visible.

Mr Richard Rimmer, F.L.S., of Dalawoodie, and Rev. Richard Simpson, of Dunscore, were elected members at a meeting presided over by Mr R. Murray, V.P.

SESSION 1888-89.

5th 'October, 1888.

ANNUAL MEETING.

Mr JAMES G. H. STARKE, M.A., F.S.A., in the Chair.

New Members.—Mrs Wm. M'Dowall, Cresswell Terrace, and Mr John Smith, St. Michael Street.

Donations.—The Secretary (Mr Robert Barbour) laid on the table the Smithsonian Report, 1885, Part I.; Elisha Mitchell Scientific Society's Journal, 1888, Part I.; and the July and August numbers of the Essex Naturalist.

SECRETARY'S REPORT.

The Honorary Secretary submitted the following report:—One change has occurred during the Session which deserves very special mention. The Society has lost the valuable services of Mr Wilson, who for several years discharged in a most efficient manner the duties of Honorary Secretary. Mr Wilson having received promotion in the Civil Service, resigned the office in consequence of leaving the town. The Society is much indebted to Mr Wilson's activity during the time he held office, and the value of his services is fully recognised.

At the last Annual Meeting the membership of the Society numbered 223, comprising 6 life, 197 ordinary, and 20 corresponding members, while the Roll-book at present shows a membership of 209, 7 being life, 183 ordinary, and 19 corresponding members. During the Session 12 new members have been elected, while 26 names have been taken off the roll, on account of death, change of residence, and a stricter scrutiny.

Seven winter meetings were held as usual during the Session. The average attendance was 29.7, being a falling off as compared with last year, when the average was 34. Nineteen communications were read, most of which were of considerable local interest. At the December meeting a new code of Rules was adopted, on the recommendation of the Committee.

On account of the very unfavourable weather during the summer only three of the five Field Meetings arranged were held, and the attendance was small, except at the July excursion, when the party numbered 33. The districts visited were Southwick, Leadhills, and Dunscore.

The Society's Transactions for Session 1886-87 have been published. The volume contains the usual record of the work done and the more important of the papers read during the Session. Two of the papers are accompanied by valuable illustrations. A special feature of the work is an appendix containing a descriptive list of articles exhibited at the *Conversazione* held on the 27th, 28th, and 29th October, 1886. Many of the articles mentioned are of historical value, and have not before been exposed to public view.

Science Gossip, *Nature*, *The Scottish Naturalist*, and *The Journal of Botany* have been taken in during the Session and circulated among the members.

The Museum and Library continue to increase, donations having been received at all the winter meetings during the Session.

On the motion of Mr James Lennox, Mr Robert Barbour was thanked for his services as secretary.

ELECTION OF OFFICE-BEARERS.

President, Mr Richard Rimmer of Dalawoodie; Vice-Presidents, Major Bowden, Messrs Francis Maxwell of Gribton, Wellwood Maxwell of Kirkennan, James G. H. Starke of Troqueer Holm; Hon. Secretary, Mr Robert Barbour; Hon. Treasurer, Mr James S. Thomson; Council—Rev. William Andson, Messrs James Barbour, James Davidson, John W. Dods, James Lennox, William M'Dowall, Miles M'Innes, John Neilson, Thomas Watson, Rev. Robert W. Weir. Auditor, Mr Thomas Laing.

The Chairman moved a vote of thanks to the retiring president, Dr Grierson, which was heartily accorded.

10th November, 1888.

MR RICHARD RIMMER, F.L.S. (the President), in the Chair.

New Members.—Mr John Blacklock, solicitor; Mr Maxwell of Screele; Rev. J. H. Thomson of Hightae.

Donations.—A fine specimen of the Peregrine Falcon, presented by Mr W. J. Maxwell of Terregles Banks ; the Proceedings of the Glasgow Natural History Society ; the first volume of the Transactions of the Highland Society (1799), presented by Mr James Barbour ; and a stake *alleged* to be from a lake dwelling in the loch at Lochmaben, presented by Mr James Lennox.

Mr J. G. H. Starke (advocate) having briefly referred to the loss which the Society had sustained in the death of Mr M'Dowall, proposed the following resolution, which was agreed to unanimously :—“ That this Society records its deep regret at the sudden death of its most distinguished member, Mr William M'Dowall, F.S.A., the historian of Dumfries, and desires that its sympathy with his domestic circle in its bereavement be communicated to his widow.”

PRESIDENT'S ADDRESS.

The President read a short inaugural address to the following effect :—Ladies and Gentlemen,—The first duty incumbent upon me this evening is to thank you very heartily for the honour you have done me in electing me to your presidential chair. When your wish that I should become the President of this Society was first intimated to me, I confess that, for a moment, I was somewhat doubtful whether I could conscientiously undertake the responsibilities pertaining to that office, but the invitation was conveyed to me in terms so cordial and so pressing that I felt myself bound in common courtesy to accept it, and this I did the more readily because it seemed to imply on your part a confidence in my ability to serve you, which was by me as unlooked-for as it is, I fear, unmerited. It will, however, be my earnest endeavour, so long as I occupy this chair, to do my little best to promote the welfare of our Society.

I will now make a few remarks respecting the progress which has been already made by the Society towards the attainment of the ends for which it was originally instituted, as well as some of the means by which it may best achieve that which still remains to be accomplished in the future. These remarks must, however, be very brief, because I rejoice to see that we are to be favoured with two communications which will, I am sure, be more attractive to you than anything I have to say this evening.

I have not yet had an opportunity of reading any of the Transactions of this Society except the last, which has recently

been issued ; but I gather from its pages quite enough to enable me to congratulate you heartily upon the work which has been done in archæological research, as well as in many of the branches of natural history. As to archæology, it would indeed be "passing strange" if we who have our home in this charming district, teeming as it is with monuments of the past, could go on our way all heedless of such relics, which, silent though they be, speak to us in "language more eloquent than words" of days and deeds which but for them would have been for ever buried in oblivion ; but, fortunately, there are among us those who have taken care to see that treasures such as these are not ignored. I read with much pleasure in the Transactions alluded to several interesting papers on this subject, especially those communicated by Mr Wilson and Mr Coles.

Passing on to natural history, botany would seem to hold a first place in the estimation of our members. This is not surprising, and full advantage has evidently been taken of the lavish manner in which Flora has bedecked this district. In geology and mineralogy I understand that good work has been done. Zoologists, too, have not been idle, and here I must not omit to notice a very interesting and able communication by Mr Armistead on "Atmospheric and other Influences on the Migration of Fishes," a subject which has not hitherto received the attention it deserves. The insecta have been well looked after, especially by Mr Lennon, whose unwearying zeal and energy in his favourite pursuit called forth my admiration, if I mistake not, so long as thirty years ago, and if he has continued until now to be as unrelaxing in his effort as he then was, it must be a very cunning species which has eluded his searching eye.

And now a word about the mollusca. It is much to be regretted that the study of these creatures has, in this district, been hitherto greatly neglected. If they are looked down upon with contempt by those who know but little about them, it ought to be remembered that nothing which the Almighty has seen fit to create can possibly be unworthy of our contemplation. To those, however, who would wish to make amends for neglected opportunities there is the satisfaction of knowing that a new field for research lies open before them in this locality, and to me it has always been a source of intense pleasure, so far as natural history is concerned, to find myself on hitherto untrodden ground.

Some of you at least may not be aware that a few years ago conchological maps of every county in Great Britain and Ireland, showing the distribution and number of species of land and fresh-water shells then known to occur in each county, were from time to time being published, and I was astonished to see that Dumfriesshire stood nearly, if not quite, at the bottom of the list, and deserving to wear the dunce's cap! Now, I want some of you to help me to blot out this stain upon our character as naturalists. Of course it is but little that I have been able as yet to effect in this direction, but that little convinces me that a diligent and persevering search will reap a rich reward. I trust, therefore, that our knowledge of the mollusca of this district will in the coming year be largely increased, and then I shall be glad, if permitted, to speak to you at greater length about them than I have been able to do this evening.

In conclusion, I would strongly urge upon you the necessity of striving to do original work. This will bring you face to face with Nature. Listen to her teachings, which, if rightly learnt, will help you to shake off the fetters of self-pride which are too often wont to stay our progress, and then she will lead you step by step onward and upward until you are enabled to form a better, though still feeble, conception of the stupendous majesty of Nature's beneficent Creator.

COMMUNICATIONS.

- I. *An Ornithological List for the Parish of Glencairn.* By Mr JOHN CORRIE of Moniaive.

The first bird to be mentioned is the Peregrine Falcon (*Falco Peregrinus*), now a rare bird in the district, although common, I believe, at one time, and known to nest regularly on the Auchinstrowan, Lorg, and Craigenputtock crags. Single birds were seen this year in the vicinity of Woodlea and Maxwelton, but it is unlikely they would be allowed to nest. The Merlin (*Falco Cæsalon*), like the Peregrine, is yearly becoming less common. During May of the present year a pair nested on the Bogrie moors, but the female was trapped and her mate is said to have been shot. The Kestrel (*Falco Tinnunculus*) is still a fairly common species, but its extermination, like that of all the hawks, can only be a matter of time. The Sparrow Hawk (*Accipiter Nisus*) may be considered rare. The Kite (*Milvus vulgaris*) is now almost, if not quite, extinct. When a boy, a tame Kite or "Gled" as we called it, was

kept at the Craigdarroch Inn, Moniaive. It was allowed perfect freedom, but never attempted to escape. One Lamb Fair day a shepherd's dog, having stolen a piece of beef, retired to a quiet corner of the inn yard to eat it. The "Gled" happened to be perched on the roof of an adjoining outhouse at the time, and the dog had no sooner squatted with his prize than the "Gled" swooped down upon him, seized the piece of beef, and bore it off to his perch, the startled collie meanwhile bolting up the nearest passage. The Common Buzzard (*Buteo vulgaris*) is said to have been common thirty or forty years ago, but it is rarely met with now, and I have never seen the bird personally. The gamekeeper on the Craigdarroch estate informs me that he has once or twice seen a pair of Buzzards "sailing" down the glen as far as Craigdarroch, but they always turned there and made away back again. When seen it has always been during the winter months, and there is not the least likelihood of the bird being met with as a nesting species.

Nocturnal birds of prey are represented by four species: The Long-Eared Owl (*Otus vulgaris*), which is not common; the Short-Eared Owl (*Otus Brachyotus*), rarer still; the Barn Owl (*Strix Flamma*), which, down to a few years ago, nested regularly at Hastings Hall; and last, the Tawny Owl (*Syrnium Stridula*), our only really common species. The Spotted Flycatcher (*Muscicapa Grisola*) may be considered common. It is a bird unconventional alike in its choice of nest sites and its selection of materials. Some years ago we found a nest in the vicinity of a joiner's workshop, built entirely of shavings, and placed in the crevice of a stone bridge.

The Common Dipper (*Cinclus Aquaticus*), a bird often spoken of as scarce, is common in Glencairn. It is met with along all our streams, and there are few places suited to its habits where I could not undertake to find a nest. It is one of our earliest nesting species, and often has its young hatched before the majority of our birds have even thought about egg-laying. I knew a nest this year in which the brood was hatched during the third week of April. It is unaccountable to me how the Dipper is so often overlooked as a songster. An attractive bird, with a good deal of individuality about it, and therefore often described, it is at the same time but rarely we see it referred to as a singer. Thus, for instance, in a series of well-written articles on bird life lately contributed to *Good Words*, the writer includes the Dipper in his list of winter residents, but omits it in his list of winter songsters,

--a most unmerited slight, as all who have listened to the bird will be ready to testify.

The Missel Thrush (*Turdus Viscivorus*) is common. Deservedly famous as a songster, he is no less gifted in the use of bird Billingsgate, and woe betide the luckless egg-collecting wight upon whose head is poured the full venom of his wrath ! The Fieldfare (*Turdus Pilaris*) is of frequent occurrence in the winter months. The Song Thrush (*Turdus Musicus*), I am pleased to say, abounds. The Blackbird (*Turdus Merula*) is plentiful, and its near ally, the Ring Ouzel (*Turdus Torquatus*), not uncommon. The Hedge-Sparrow (*Accentor Modularis*) is common, and sociable as well. Two years ago a remarkable instance of interrupted egg-laying came under my notice. A nest had been built in the garden hedge, and a single egg laid therein, when the birds to all appearance forsook the nest. Six days later, however, the birds returned, and re-arranged the nest, when laying was continued. The Robin (*Erythaca Rubecula*), another lover of human abodes, is met with everywhere. The Redstart (*Phoenicurea Ruticilla*), although occurring throughout the parish, can scarcely be considered common anywhere. In Tynron district it seems to be much more abundant. On one occasion I found no fewer than three nests in the immediate vicinity of Tynron Village. The Whin Chat (*Saxicola Rubetra*) a bird we call Stonechat in Glencairn, and the Wheatear (*Saxicola Œnanthe*) are both common. A year or two ago I would have described the Grasshopper Warbler (*Salicaria Locustella*) as rare, but I have satisfied myself that in Glencairn at least it occurs in considerable numbers. I had my attention first directed to the bird some five or six years ago when rod-fishing on the Cairn, and I have frequently heard it during similar excursions since. The nest is said to be very difficult to find, and to this circumstance may perhaps be attributed my want of success in the search. I have information of a bird shot in the water of Ken district which, from the description I received of its note and plumage, and, what is still more characteristic, its peculiar habit of skulking, I have no doubt was the Grasshopper Warbler. That delightful nocturnal songster, the Sedge Warbler (*Salicaria Phragmitis*) is common. During mid-summer it sings the greater part of the night as well as the day, and while some people profess not to care for its hurrying manner in song, I have often been entranced with its melody. Both the Blackcap (*Curruca Atricapilla*) and Wood Warbler (*Sylvia Sibilatrix*) are rare. The

Whitethroat (*Curruca Cinerea*) and Willow Wren (*Sylvia Trochilus*) are fairly numerous, while the Lesser Whitethroat (*Carruca Sylviella*) and Chiffchaff (*Sylvia Hippolais*) may perhaps be considered rare. The Garden Warbler (*Curruca Hortensis*) I am disposed to think must occur with us, but I have failed to recognise it. The Gold-crested Regulus (*Regulus Cristatus*), the smallest not only of British but of European birds, and one of the prettiest, is not uncommon. It is our only species that builds a hanging nest, and the structure, in compactness and beauty and architecture, is only rivalled by that of the Chaffinch. The Wren (*Troglodytes Vulgaris*) is plentiful, and a favourite with everybody. Strange sites are often selected for nesting, and great ingenuity shown in concealment. We once saw a nest built in a tuft of waterdrift which a flooded stream had left suspended from the branch of an overhanging tree. On another occasion we found a nest concealed in a clump of polopody fern on the rocky face of Craigenputtock Moor, a site which appeared much better suited to the hawk than to the tiny wren. The Creeper (*Certhia Familiaris*) can scarcely be considered rare, but it is retired and unobtrusive in habits, and, on that account, often overlooked. The Great Tit (*Parus Major*) is met with sparsely throughout the parish. It is a bird endowed with great strength of bill, and we have seen it break the shell of a hazel-nut with ease. In autumn the sharp tap-tap of its bill in the nut woods may often be heard when the bird itself is unseen. The Blue Tit (*Parus Cæruleus*) is common. The Cole Tit (*Parus Ater*) and Long-Tailed Tit (*Parus Candatus*) are both somewhat scarce. When I have seen the latter at all it has usually been in flocks of six or more intent upon some winter food foray. The Bohemian Waxwing (*Bombycilla Garrula*) was seen once many years ago in the vicinity of Hastings Hall—the only instance of its occurrence. Among the Motacillidæ, the Pied Wagtail (*Motacilla Alba*) is the only really resident variety, and it is likewise the most common. The Grey Wagtail (*Motacilla Boarula*), the handsomest of its class, can scarcely be considered a plentiful bird. During the winter months it is entirely absent. Ray's Wagtail (*Motacilla Flava*), the smallest of the wagtails, is also the least common. I have seen it in one locality for several years in succession, but I am doubtful if it occurs anything like generally. The Tree Pipit (*Anthus Arboreus*) is not uncommon. The Meadow Pipit (*Anthus Pratensis*) is abundant. The Sky Lark (*Alauda Arvensis*), our "feathered Pan," as

Anderson calls it, carols over all our meadows. The Snow Bunting (*Plectrophanes Niv Lis*) has only been seen once. The Common Bunting (*Emberiza Miliaria*), although recorded for the lower portions of the parish, does not appear to be generally distributed. The Black-Headed Bunting (*Emberiza Schoeniclus*) is not by any means an uncommon bird, but it is rarely seen at any great distance from its nesting haunts—the rushy margins of streams or marshes. The Yellow Hammer (*Emberiza Citrinella*) is still a common species, although sadly reduced in numbers by recent severe winters. The Chaffinch (*Fringilla Coelebs*) is almost as common as the ubiquitous House Sparrow, and, despite his handsome coat, almost as little prized. He sings a good song, nevertheless, and builds the prettiest nest of all our British birds. The Mountain Finch (*Fringilla Montifringilla*) is known to us as an occasional visitor only. The House Sparrow (*Passer Domesticus*) is met with everywhere. The larger number build their nests under the eaves of houses, but no inconsiderable portion build on trees. When a tree is selected the structure is invariably large and ugly. The Greenfinch (*Coccothraustes Chloris*) occurs plentifully. The Goldfinch (*Carduelis Elegans*), a common enough bird, I believe, at one time, must now be considered rare. The Siskin (*Carduelis Spinus*) is occasionally seen as a visitor, but it has never been known to nest. The Common Linnet (*Linota Cannabina*) is abundant. The Mountain Linnet (*Linota Montium*) visits us from time to time in flocks. One winter, four or five years ago, I caught two of these birds in the hand by simply following a flock of them and imitating their feeding note. The Lesser Redpoll (*Linota Linaria*) is rare even as a visitor. The Bullfinch (*Pyrrhula Vulgaris*), although seen here and there throughout the parish, occurs in no great numbers anywhere. The Starling (*Sturnus Vulgaris*) in Glencairn, as elsewhere, is becoming increasingly common. A generation ago starlings were almost unknown, and I am credibly informed that the first starling seen in Glencairn was sold for half-a-sovereign, and the bird was a dead one. The Raven (*Corvus Corax*) down to within recent years nested regularly on the face of Auchenstrowan Crag, but the site has now been abandoned, and we are not aware of any other in the parish or its vicinity. The birds, however, are still seen at intervals. The Crow (*Corvus Corone*) is common, and, I need scarcely say, so is the Rook (*Corvus Frugilegus*). It is a popular belief in the South of Scotland that crow nest-building commences on the first Sabbath

of March ; but if this is so, the birds would appear to get confused in their dates occasionally, as we have seen them re-habilitating their old homes as early as the second week in February. In Chambers's "Book of Days," the twelfth day after Candlemas (O. S.) is similarly associated with the nesting habits of the crow ; and we are told the Rev. Dr Waugh used to relate that, on his return from the first year's session at the University of Edinburgh, his father's gardener undertook to give him a few lessons in natural history. Among other things he told him that the "craws" (rooks) always began building twelve days after Candlemas. Wishing to show off his learning, young Waugh asked the old man if the craws counted by the old or by the new style, just then introduced by Act of Parliament. Turning upon the young student a look of contempt, the old gardener said : "Young man, craws care naething for Acts of Parliament." We are disposed to think they care just as little for popular beliefs, and that in the matter of nest-building they observe no hard and fast rule whatsoever. The truth is that by the first Sunday in March, or even the twelfth day after Candlemas, nest-building has become so general that even the unobservant can no longer shut their eyes to the fact. The Jackdaw (*Corvus Monedula*) is plentiful. A few nest in ruined buildings and in chimneys, but the greater number make use of rabbit burrows. When White wrote his delightful "Natural History of Selborne," this habit of nesting in burrows was considered something very remarkable, but we suppose instances of its occurrence are now known to be frequent. The Magpie (*Pica Caudata*) is now almost, if not quite, extirpated. Our welcome visitor, the Cuckoo (*Cuculus Canorus*) is common. This bird's peculiar habits of nidification are well known, but I have an incident which is probably unique. Robert Currie, shepherd at Castlehill, in the parish of Durrisdeer, while on his usual morning round of inspection among the sheep stock under his care, noticed a young bird lying on the ground. Lifting it, and looking about him, he discovered a nest, which contained a similar birdling, not far off, and in this nest he placed the birdling he had picked up. Next morning, on making a return visit to the spot, he was surprised to find the bird outside the nest again. He replaced it once more, but soon afterwards found it outside as before—this time dead from exposure. He then discovered that both of the birds were young cuckoos, and each being actuated by the instinct to eject its fellow-occupant from the nest. The

sanguinary struggle had proceeded until one of the combatants succumbed, a victim to the instinct of its kind. That richest plumaged of British birds, the Kingfisher (*Alcedo Ispida*) is rare. The only place I have ever seen it is on the Cairn, in the vicinity of Maxwelton. The Swallow (*Hirundo Rustica*), the Martin (*Hirundo Urbica*), and the Sand Martin (*Hirundo Riparia*) are all common. A few Swifts (*Cypselus Apus*) still nest with us, but it is a rare bird compared with what it was at one time. A two-storey thatched house which occupied a somewhat isolated site in our little town of Moniaive used to be a favourite nesting place, but the house was pulled down some years ago, and the birds have never returned in anything like the same numbers since. The Night Jar (*Caprimulgus Europæus*) is said to nest in some of the more remote nooks of the parish, but I never even saw the bird personally until this summer, when a single bird was observed for two nights in succession hawking for moths in my own garden. The Ring Dove (*Columba Palumbus*) is abundant. This year I found a Ring Dove's nest, containing young, placed in a hawthorn tree at an elevation of not more than four feet from the ground, and side by side with it a nest of the blackbird containing eggs. The low elevation for a Ring Dove's nest and the companionship appeared to me alike remarkable. The Pheasant (*Phasianus Colchicus*) is common, and the same may be said of the Black Grouse (*Tetrao Tetrix*), the Red Grouse (*Lagopus Scoticus*), and the Common Partridge (*Pedrix Cinerea*). The Golden Plover (*Charadrius Pluvialis*) is met with on all our hills. The Lapwing (*Vanellus Cristatus*) is plentiful. This bird, as is well known, is a careful mother, and in the stirring days of persecution her watchfulness against intrusion is said to have often proved fatal to the lonely wanderers on the moors and fells. The Heron (*Ardea Cinerea*) is not uncommon in the district, probably owing to the circumstance that we have an old-established heronry at Craigmuir. The most of the trees were unfortunately blown down during the gales of December, 1883, and January, 1884, and I am disposed to think there has been a marked diminution in the number of birds since. The Curlew (*Numenius Arquata*) is very common. The Common Red-Shank (*Totanus Calidris*) we have recorded for one locality, Loch Urr, on the boundary line between Dumfriesshire and Kirkcudbrightshire, where a few pairs annually come to breed. The Common Sand-Piper (*Totanus Hypoleuca*) is met with along all our streams. The Wood-

cock (*Scolopax Rusticola*) is common as a winter visitor, and, I have reason to believe, not infrequent as a nesting species. Last summer, for instance, a pair took up their quarters in a small plantation on the Glencairn side of the hill-ridge separating Glencairn from Tynron. The cry of the birds was often heard on still nights, and the locality being a suitable nesting one, I have not a doubt the birds remained to breed. Sportsmen speak of the woodcock as "a hard-winged bird," and anyone who is familiar with it can recognise it at once by the rattle of its wings on taking to flight. Another peculiarity is the eyes, which are remarkably large and fine, hence Butler in his "Hudibras" speaks of men "finding woodcocks by their eyes." In marshy tracts throughout the parish the Common Snipe (*Scolopax Gallinago*) occurs plentifully. The Jack Snipe (*Scolopax Gallinula*), a much smaller and scarcer bird than the preceding, is somewhat rare. I am disposed to think it remains to nestle, but cannot speak positively as to this. It has been seen about the commencement of August, and, if not a nesting species, August seems a late month to leave and an early one to return. The Land-Rail (*Crex Pratensis*) may be considered common. The Moor Hen (*Gallinula Chloropus*) inhabits all our streams. The Coot (*Fulica Atra*) is not uncommon on lochs outside the parish boundaries. Inside the parish it is rather a rare bird. Both the Wild Duck (*Anas Boschas*) and Teal (*Anas Crecca*) are fairly common. The Widgeon (*Anas Penelope*) occurs as a winter visitor. I am told that some few birds remain throughout the breeding season, but I have been unable to authenticate this. Single specimens of the Golden Eye (*Fuligula Clangula*) and the Goosander (*Mergus Merganser*) have been shot within recent years on the Cairn, and the stuffed specimens are preserved in the gun-room at Crawfordton House. Another species of duck, said to be rare, was shot by Mr William Davidson, gamekeeper on Crawfordton, near to Snade Mill some three years ago. The Little Grebe or Dabchick (*Podiceps Minor*) was seen by me on the Cairn during the winter of 1885, and I have since found it nesting on one of the smallest of the lochs in the parish. It is by far the most interesting of the water birds with which I am acquainted, and if proprietors would only instruct their keepers to preserve, I am disposed to think it might become much more common than it presently is. The Common Cormorant (*Phalacrocorax Carbo*) is a regular visitor to Loch Urr, and has even been seen within a few hundred yards of

Mouiaive—surely a remarkable record for an inland parish such as Glencairn. The Black-Headed Gull (*Larus Redibundus*) abounds during the summer months, and large numbers annually breed on the little rocky islet in Loch Urr. During winter they leave the district, although a few may return during seasons of exceptional mildness. The Common Gull (*Larus Canus*), though not nearly so numerous as *Ridibundus*, occurs in considerable numbers during summer, but is less common in winter. The Great Black-Backed Gull (*Larus Marinus*) is not infrequent as a visitor during the winter and spring months. When seen it is usually in the vicinity of the river, and, being anything but dainty in its tastes, it doubtless helps to keep our waters pure and sweet. It is not a lovable bird, however, and, as it is the last on our list, we half regret having adopted an arrangement which compels us to close our references to the Birds of Glencairn with one that is so ill-favoured.

Note.—Glencairn and Tynron being conterminous parishes, a comparison of the two lists may not be without interest. The Tynron list comprises eighty-six birds; the Glencairn list ninety nine birds, or one hundred inclusive of one doubtful. Three species included by Mr Brown in his Tynron list are absent from my Glencairn list, while sixteen species recorded for Glencairn are absent in Tynron. Of these fully one-half are water birds, clearly showing that the want of a loch of any considerable size is the reason why Tynron, a district otherwise admirably suited to bird life, falls so far short of Glencairn.

II. *The Birds of Upper Nithsdale.* By ANSTRUTHER DAVIDSON, M.D., of Sanquhar.

For the last three years I have been carefully observing and recording the numbers and habits of the *avi fauna* of this district. Some of these records I have transcribed for your benefit to-night, chiefly those dealing with the numbers and distribution of our native birds. It would serve no good purpose to enumerate the migratory species, as these are almost similar to migrants in other localities, only a very few notable captures having been recorded, so I will proceed to the account of the birds that breed in Upper Nithsdale, including thereby the parishes of Sanquhar and Kirkeconnell.

First in order comes the *Passeres*, the most important in this district, numbering 41 out of a total of 67. Of these the Missel Thrush and Blackbird are both common, the former more wary and cunning, electing the less frequented woods, while the "blackie" shows a decided attachment to the haunts of man. The Song Thrush is comparatively a rare bird. Of the Ring Ousel this is *par excellence* the home. In every rocky glen or rugged mountain scar his impudent chatter may be heard. With his nest firmly planted on the ledge of a steep rock or buried in the heather bush on an overhanging crag in some lonely glen, he rears his voracious brood in complete security. The same, or presumably the same, pair return year after year to the same place to breed, and the nests of many seasons can be found within a few yards of each other. Some glens are, for no apparent reason, more affected than others. In one of these, not more than a mile long, I in one season saw five nests, and from the number of birds concluded that still others existed. In such circumstances suitable sites are not always available, and he contents himself with building on the edge of a sheep drain or sloping knoll. Solitary and wary in their breeding habits, they avoid the more frequented country. Once only have I found them forgetful, but the place (the Holm woods) being too public they forsook it when half the eggs had been laid. They begin to build very shortly after their arrival, in the end of April, and, in the event of the nest being destroyed, rapidly build anew. In one instance, when the nest was robbed of 4 eggs on April 24, the birds built again near the same site, and by March 9 had again 4 eggs. These having been removed by some wanton boys, they again renewed their toil, and had built and replenished a new abode by the 19th. Being again robbed they refused to build again, no doubt thinking that 3 nests and 12 eggs in 30 days were sufficient to command greater success. For the remainder of the season they frequented their unfortunate haunt and returned next season, when, I am pleased to say, they were successful in rearing a vigorous brood. The Wheatear, Whinchat, Redbreast, Wren, Willow Wren, and Hedge Sparrow are all common. The Redstart and Sedge Warbler are somewhat rare, the latter particularly so, on account of the lack of suitable breeding ground here, though common enough on the lower reaches of the Nith from Thornhill downwards. The Dipper comes next, and, like the ubiquitous sparrow, is rapidly acquiring the habit of utilising the crevices and holes in bridges and tree roots, instead of building a

proper nest. In this utilitarian age we can sympathise with his evolutionary progress, as his original nest is almost the size of a small bee hive, and must entail a vast amount of labour. I show you here one such nest, built behind a waterfall, lined outside with a sufficient covering of moss to prevent the entrance of water, which is also precluded by the entrance being formed below. Though the nest is so large, let not the uninitiated think they are easily discovered. The Dipper chooses the site with considerable care, the secrecy of which is enhanced by the mossy covering of its nest so closely harmonising with the surroundings. Unlike most of our birds he prefers to stay throughout the winter, and year after year selects the same, or almost the same, site whereon to build, and with a sublime indifference to climatic influence has his nest regularly built and four or five eggs deposited by the 14th of April. Mr Brown, in speaking of this bird, says: "The same nest is used year after year unless carried away by floods." My observations show entirely the reverse. I have never found them re-occupying the old nest, but if by design or otherwise the nest has been removed, they re-build in the same place, and to ensure their doing so it has of late been my habit to remove the nest when the brood has departed. Only once have I observed them re-occupying a nest which had been robbed and partially destroyed. The Whitethroat and Crested Wren are fairly common. The Garden Warbler is rare, only one instance of its nesting having come under my observation. Of the Tits family the Blue and Great Tit only are found. The Pied or Grey Wag-tails are the only representatives of that family. The latter, in spite of considerable persecution, is able by its retiring habits and cunning choice of nest to exist, though in decreasing numbers. The Meadow Pipit, Tree Pipit, Chaffinch, and Skylark are very common, as also are the Martin, Sand Martin, and Swallow. The House Sparrow is everywhere except at Wanlockhead. The Spotted Fly-catcher, Greenfinch, and Yellow Hammer are comparatively rare, though the latter are familiar enough as winter visitors to the farmers' grain yards. The Fly-catcher being a late builder is not easily discovered. By the nest shown you you will observe this bird has chosen an unusual site, having built its nest inside that of a blackbird's.

In the Euchar Woods, the Tree Creeper is not uncommon, but so far I have failed to find its nest. The Reed Bunting and Bullfinch are frequently met with in the wooded glens and rushy

moors. The Goldfinch is very rare. Only twice have I known it to nest in the last four years—once in Kirkconnell and once in Sanquhar. The Common Linnet probably breeds in the district, but I have so far failed to locate it. The Twite and Stonechat have been reported—the former, I think, correctly, but the latter, I think, must have been a mistake, as I have never seen the bird at any time. Starlings and Swifts occupy all the favourable sites in the walls of the old castle and other buildings. The Swifts, being late arrivals find the democratic sparrows in possession of every available hole, and the first week or so is occupied with their uncompensated eviction, and the subsequent occupation of the disputed premises, after which their shrill screaming is little heard till their brood is hatched and they congregate again for the autumn migration. The Magpie and Carrion Crow still continue to flourish in spite of guns and traps. Jackdaws nest in many of the chimney stalks in the town, but their chief strongholds are the rocky steeps in Kello, Spango, and Polveoch burns. Though there is but one rookery in the district, yet it is large enough to supply rooks for the whole shire. Much has been written for and against this bird, and my own observations lead me to regard him as being quite as black as he is painted. His principles are purely Socialistic—minus the dynamite. See him as he alights on the farmer's field, and paces with slow and dignified stride, with head erect and swelling breast—why he seems to be lord of the soil, or at least gives you the impression that he believes every rood of ground should maintain its rook. In this country they are far too numerous. To a certain extent they are useful, more especially in the autumn, when, retiring to the hills, they consume the larvæ so destructive to the pasture. For the greater part of the season he is a thief and a robber, living by reaping on what he bestowed no labour. It was not always so, however. The rook, like the genus *homo*, was created with perfectly innocent tastes, but he, too, fell, became civilised, and from being chiefly an insect feeder, he developed a taste for grain, potatoes, and other useful cereals. This is where he is at present. To what depths he may attain, time only can tell. In the nesting season their depredations among eggs are simply enormous. They make no distinction, but quarter the fields systematically, take every egg or young bird, either eating them near the spot or carrying them home to their nests. When the rook has removed the last egg he very carefully turns over the lining of the nest as if to ensure his having secured

the whole. I have often wondered at this habit, and think it has been acquired in the robbing of nests of those birds like grouse and duck, whose eggs are so carefully covered when the parent bird is absent. The lapwing alone of all birds nesting in the open can by his "right arm" hold his own against the crow; but he is sometimes outwitted by the superior cunning of the enemy. An illustration of this was given me by an eye-witness, who observed a crow fly away after a series of futile attempts on the lapwing's nest. In a short time after he returned with two companions, who successfully enticed the lapwing from the neighbourhood of its nest, and left the other to the quiet enjoyment of the plunder. In another instance, where two crows discovered and failed to dislodge a wild duck, different tactics were enforced. Apparently conscious that all comes to them who can but wait, they laid siege to the nest, and for two days one of them remained on the ground, and eventually seized the opportunity when the duck had gone for his diurnal constitutional, and plundered the whole. Of all the feathered tribes, the sparrow alone seems to understand the crow. He builds his nest among the very twigs the crow has gathered as the foundation of his nest, and there rears his brood unmolested by the abstract-minded thief who sits above him. For many years a pair of Ravens have nested in the parish. Two seasons ago they attempted to build on the steepest part of the rock which they frequent, but the wind carried it away, and they had to renew their work on more suitable foundation. Next year the same thing was attempted, and again it failed. I shall watch with interest whether next season they have profited by their failures. The Cuckoo is common; in Euchar glen even abundant. I once saw ten in a flock there. The dates of their arrival for the last three years have been April 28, April 7, and May 4. The Night Jar is very rare. One pair, however, have for years nested in the Holm woods. The Tawny Owl and Long-eared Owl are both natives. The former is common; the latter rare, and limited to one locality. The hilly nature of this district favours the continuance of birds of prey, and we can still find the Peregrine, Merlin, Kestrel, and Sparrow Hawk. The Peregrine has of late only appeared as a visitor in the spring, but for many years it nested regularly in Kirkconnel parish. The game little Merlin, nesting in the heather far among the hills, defies extermination. The Sparrow Hawk, more accessible, is gradually becoming scarcer, and may soon be extinct. The Kestrel, being more harmless than the

others, is quite common, there being scarcely an outlying glen in which his rude-shaped nest may not be found. That the Ring Dove exists you have but to ask the farmers. Of game birds we have the usual group—Red and Black Grouse, Partridge, and Pheasant—and all in abundance. The Corncrake or Landrail is common, arriving usually on the 13th May. A few pairs of Moorhen and at least one pair of Coots breed among the sedges near the Nith. Curlews and Lapwings are very abundant. Last season, on account of the cold spring, they were almost absent from the hills, and in consequence more than usually numerous on the plains. The Curlew is one of our most regular migrants, almost always arriving in the first week of March. Golden Plover and Snipe are present in fair abundance. The Sandpiper, or Sandwhaup, as it is locally called, is somewhat common on the Nith and tributaries, and so long as it continues to build so cunningly its numbers will continue to increase. This season a pair of Redshanks nested on Saughar Moor, but the possibility of their return was rendered improbable by the boy who observed it bowling over the bird with a stone and securing the eggs. So far this is the only instance I know of its having attempted to breed in the district, though common enough at Cumnock, where, however, the ground is more suitable. A few pairs of Herons have for many years occupied some large fir trees in the woods around, and have so secluded themselves as to escape general observation. Four years ago a few Black-headed Gulls bred on the small island in the Black Loch on the Town Moor. In the seasons following the numbers were so increased that the eggs literally covered the island, and some, unable to find accommodation there, build themselves nests like little boats on the floating leaves of the water-lilies and bogbean. Of the duck tribe, only the Teal and Mallard remain throughout the summer. The former is very rare and not a regular breeder; but the latter is common, and I think increasing in numbers. Contrary to its usual habit, it here generally builds in the hollows of some rocky steep or overhanging ledge from 5 to 20 feet above the river bed, and with true maternal forethought nests always above a pool. When the young are hatched the duck must carry her young to the water, or drop them over into the water beneath, an expedient certain to prove disastrous had she not chosen her nest over the deepest part. Year after year they return to the same ground. A gentleman in Kirkconnel, who interests himself in the

species, showed me a hollow where for the last eight or nine years a duck had regularly hatched her brood. At the time we visited it ten eggs had been laid, and through all these years there never had been less. A short distance from this another has nested successfully for the last four years, and so secluded is their retreat that I have every hope they will occupy it undisturbed for many years to come. These then are the 67 birds breeding in the district at the present time. Probably a few more will yet fall to be added, such as the Linnet, Twite (before mentioned), and the Woodcock, which this season was observed by one of the keepers in June. The absence of some of the more familiar songsters can be accounted for by the absence of shrub and sheltering bush, yet, withal, the record for an inland district is a large one.

7th of December, 1888.

Rev. WILLIAM ANDSON in the Chair.

New Member.—Mr Bernard Drummond.

Donations.—A List of the Mosses and Hepaticæ of Dumfries and Kirkcudbright Shires, by Mr James M'Andrew; a Collection of Birds' Nests, by Dr Davidson; "The Gardener's Dictionary," in 3 volumes, published in London 1748, by Mr Croal; and the Transactions of several Societies.

TREASURER'S REPORT.

The hon. Treasurer submitted his annual report, which was unanimously adopted on the motion of Mr James Lennox.

CHARGE.

Balance from last Session	...	...	...	...	£7	9	1
158 Subscriptions at 2s 6d	...	...	...	...	19	15	0
6 do., New Members, 5s	...	...	..	...	1	10	0
Sale of Transactions	...	...	...	..	3	4	6
Do. Glass Case...	...	...	...	...	0	10	0
Donation from Mr Wilson (Plate)	...	...	...	...	1	0	0
Do. Mr Coles	...	...	...	...	2	0	0
Interest on Bank Account	...	...	...	...	0	6	3
Two Life Members at Two Guineas	..	...	..	...	4	4	0

£39 18 10

DISCHARGE.

Purchase of Books and Journals	...	...	...	...	£2	1	6
Binding Books	...	...	...	...	0	18	4
Stationery	...	..	...	...	0	6	0
Printing and Advertising	...	..	...	...	3	14	0
Gas	...	...	...	...	0	7	6
Secretary's outlays (Mr Wilson)	...	...	...	...	2	18	9
Do. do. (Mr Barbour)	...	...	...	...	0	14	5
Treasurer's do. (Mr Thomson)	...	...	...	...	0	7	4
Hall Keeper's Salary	..	...	...	...	1	10	0
Commission on Arrears to Mr Brown	...	...	...	...	0	8	0
Transactions—Printing and Binding—								
Akerman, London, for Plates	...	...	£10	10	0		
Herald, Printing and Binding	...	...	15	7	0		
			<hr/>			25	17	0
					£39	2	10	
Balance at close of Session—Cash in hand	...	...	...	...	0	16	0
					<hr/>			
					£39	18	10	

DUMFRIES, 3rd Dec., 1888.—I have examined the Treasurer's Accounts and relative Vouchers, and find them correctly stated.

MILES M'INNES, Auditor.

COMMUNICATIONS.

I. *The Tumulus and Stone-Circles at Cauldside.* By Mr
FREDERICK R. COLES (abridged).

The remains noticed in this paper are a mound of smallish rounded granite boulders sloping sharply up from a broad circular base to a summit some 10 feet wide. Its height is from ten to twelve feet; the base composed of a ridge of large and flatter stones, and guarding this there is a strong ring of much larger granite boulders, evidently embedded to keep the rest in position. The diameter of this base is sixty feet. In the centre of the heap of stones is a well-defined *Kist-vaen*. The lid and sides are of whinstone slabs, four feet three inches by two feet and six or seven inches thick. The grave lies open, having been explored many years ago, I believe, by Mr James Faed, but as to its contents I can learn nothing.

Thirty feet S.E. from the outer ring of boulders stand the remains of a stone circle. [It is ridiculous, in the face of recent antiquarian research, to use the term "Druidical" in connection with stone circles.] Its diameter is sixty-six feet. It is without trace of any central monolith, and the stones composing it were

fourteen in number, ten of which are still upright. On none of these stones is there anything like a carved cup or ring-mark. So much for tumulus and stone circle. If you turn your back to the tumulus on its N.W. side and walk away in a line with its diameter, you will, at one hundred and eighty feet off, trip against a half-sunk monolith; thirty feet further in the same direction and a second such stone arrests you; and again another thirty feet and you stand on the ring of a third circle, whose diameter also is thirty feet, and the peculiarity of which is that the kist-vaen within lies, not in the centre, but fully two feet off it, towards the arc nearest the tumulus. This circle and kist-vaen, not so many years ago, were as completely buried in a heap of granite boulders as the above described tumulus; but the stones were carried away to build part of the neighbouring dyke. The covering slab of this kist-vaen measures five feet three inches by three feet three inches, and is about eight inches thick; and is supported on two thin slabs at the E. and W. ends of the grave. Numbers of boulders fill up the space below it, so that it has most probably been at one time opened and its contents, if any, disturbed. There is no vestige of cup or ring mark on any of these stones. On my return to Cauldside, I passed several small irregular heaps of granite boulders. There being nothing to indicate any connection with the relics just explored, or any pre-arranged plan among themselves, I took scant notice of these heaps; but in the last of them (eastwards), on a stone somewhat conical and about two feet and a half high, two distinct marks arrested me, both, I am inclined to think, ancient and artificial—one certainly artificial. The one, which may be water-formed (or the lower half of the cavity of a pebble) is a purely circular depression about two inches in diameter, and $\frac{3}{4}$ of an inch deep. The other, nearly three inches in diameter and two and a half inches deep, is funnel-shaped, its sides narrowing with perfect smoothness to the small, flat, button-like hole at the extremity. The same funnel-shaped hollow occurs on a similarly-grained block of sandstone in Ohio, near Ironton, Lawrence Co., and at Redhills, near Penrith. There is only one other fact to notice in connection with this district, and that is the frequent occurrence of small circular ridges now overgrown with grass and heather, which, I have little doubt, would prove to be of the same nature as that which forms the northern kist-vaen circle in this series of three at Cauldside.

II. *Theories of the Ice Age and Notes on the Glacial Geology of the immediate Neighbourhood.* By MR JAMES WATT.
(Epitomised by the author.)

The primary cause of great variations of climate is the position of the earth in relation to the Sun.

Glacial conditions ensued in consequence of (a) a gradual increase of ellipticity of the earth's orbit until it reached a period of maximum eccentricity, or extreme elliptical form; (b) the precession of the equinoxes.

The combined effect of these two causes must, to a very large extent, influence the climate of the earth, because from precessional movement when the winter solstice in the northern hemisphere occurs when the earth is furthest from the sun in June, not as now in December, when it is nearest, and also, when from greater ellipticity of the orbit, the distance of the earth from the sun is, in the winter solstice, several millions of miles greater than now, then, in such circumstances, glacial conditions of excessive severity would prevail.

Sir Charles Lyall, in his great work on the "Principles of Geology," showed conclusively that changes in the geography of the globe, combined with precession, would account for great changes of climate. But it was not till the appearance in 1864 of Dr James Croll's remarkable paper, "On the physical cause of change of climate during Geological Epochs," that it became clear that the primary cause of great variations of climate was astronomical. Dr Croll made calculations for the form of the earth's orbit from the year 1800 for three millions of years back, and one million of years forward, calculated at intervals of 50,000 years, and his calculations have been verified by eminent mathematicians in Europe and America. According to these calculations, the period of the last great increase in the ellipticity of the earth's orbit was reached 240,000 years back, and terminated about 80,000 years ago, embracing a period of 160,000 years. That period we call the "Great Ice Age," or "Glacial Epoch." The cold was most intense about 200,000 or 210,000 years ago, and it is maintained by Croll and other eminent men that glacial conditions during the period of high eccentricity would not be continuous in northern and southern hemispheres, but that each hemisphere "must have," in Professor James Geikie's own words, "experienced several great vicissitudes of climate. Glacial conditions

lasting for thousands of years must have alternated with equally prolonged periods of genial conditions, for the latter no less than the former are a necessary consequence of extreme ellipticity combined with the precession of the equinoxes."

That the position of the earth in relation to the sun has been the great originating cause of the extraordinary climatal conditions which prevailed during the glacial epoch is now universally admitted, but considerable difference of opinion prevails as to the right interpretation of the testimony of the rocks; what the vast relics of the "Ice Age" really tell us as to the physical conditions which then prevailed over the surface of our planet. It is certainly known that the ice attained to a very great thickness, for marks of its presence are to be found on the tops of mountains in Canada from 3000 to 5000 feet high. It is certain that our own country and part of England was in the same condition as Greenland is now, and also that a large part of Northern Europe and America, at a comparatively recent period, geologically speaking, lay deep buried under a vast sheet of "thick ribbed ice," so thick that only the peaks of the highest mountains stood up unburied. It is held by Croll and other eminent geologists and physicists that a great ice cap would gather during long thousands of years, reaching far down into what is now the temperate zone, and that such conditions would prevail for thousands of years alternately in northern and southern hemispheres. But there are other eminent physicists who maintain that glacial conditions during the period of high eccentricity were simultaneous in both hemispheres. Able men differ on the matter, and for the present we can but regard their various and conflicting opinions as only "the guesses of the wise." While there are differences of opinion as to the nature and extent of glacial conditions, there is general agreement that the primary cause of such conditions was the position of the earth in relation to the sun.

Local Notes.—A remarkable example of the work of the great ice sheet came under my notice when the railway bridge below Dalbeattie was built a few years ago. The foundation for the piers of the bridge were laid at a depth of twenty or twenty-five feet below the surface, or bed of the stream. The material gone through was entirely boulder clay, and at the bottom, strange to say, indications of an earlier earth surface and soil were found, with fragments of wood and hazel-nuts.

The underlying strata over a wide area round Dumfries is Permian Breccia, covered over with boulder clay of a somewhat friable nature. The Breccia stands out at Cluden Mills, the Craigs, and other places. All are familiar with the Permian sandstone of Locharbriggs and other quarries in the county, but from the soft character of the stone, it does not retain marks of glaciation at exposed places so well as harder rocks.

A striking feature of the locality, as of nearly the whole of the Scottish Lowlands, is the rolling character of the country; the green knolls, and rampart-looking ridges usually called "kames," composed of stones of all sizes, gravel, and sand. It is admitted that these mounds cannot be clearly accounted for, but Professor James Geikie is of opinion that they point to abundant streams of running water discharged across the country from the rapid melting of snow and ice, to a "pluvial period," or after the Ice Age "Great Thaw" spoken of by Sir Charles Lyall.

N.B.—It may be noticed here, that Dr Croll and others, who have made calculations for the eccentricities of the orbit of the earth and other planets, used Leverrier's Formula in making their calculations. In conversation with Dr Young, Professor of Geology in the University of Glasgow, he hinted to me that the formula was not reliable. If this were true, it is obvious that the conclusions as to the last period of high eccentricity might be erroneous. In these circumstances I thought it would be well to make enquiry at the highest authority whether the formula was reliable or not. Dr Chinnock very kindly, in the interests of the Society, and on my own account, wrote to the Astronomer Royal making the enquiry. The courteous reply received from Greenwich Observatory is herewith given in full. It will be seen that Leverrier's Formula cannot be considered unreliable for the *last* Glacial Epoch, which is all that we have under consideration. When every allowance is made it does not appear that the period covered by the epoch, as calculated by Dr Croll and others, can be very far out.

J. W.

ROYAL OBSERVATORY, GREENWICH,
LONDON, S.E., 1890, Sept. 19.

Dr E. J. CHINNOCK,
DEAR SIR,

Leverrier's Formula for the eccentricities of the orbit of the earth and other planets have been computed with great care, but the calculations are rather complicated, and independ-

ently of a possible error in computing, the formula would be more or less affected by any errors which there might be in the assumed values of the masses of the planets, and, as Leverrier has pointed out, the resulting error in the calculated eccentricity of the earth's orbit would increase with the time, so that after several periods the formula could not be trusted. It is also to be noted that his memoir was written in 1839, before the discovery of Neptune, and that no account has been taken of the influence of the mass of that planet on the eccentricity of the earth's orbit. Leverrier states that his formula differs completely from those given by Lagrange in 1782, chiefly through the latter having assumed a mass for Venus, which is nearly half as large again as the value now accepted, and consequently, after a few years, Lagrange's formula became inaccurate. Though the uncertainty in the masses of the planets is now much less, caution is necessary in basing conclusions on the values deduced from Leverrier's formula for very remote periods. He has himself limited his computations from his formula to a period of 200,000 years, viz., 110,000 years before the epoch 1800 and 100,000 years after that date, though in a diagram he has given a curve showing the eccentricity of the earth's orbit for 200,000 years after 1800.

I am, DEAR SIR,

Yours faithfully,

W. H. M. CHRISTIE.

III. *Botanical Notes.* By Mr JAMES M'ANDREW, of
New-Galloway.

PREFATORY NOTE.—The following lists of Mosses and Hepaticæ—forming a contribution to the Cryptogamic Flora of Dumfriesshire and Kirkcudbrightshire—have been compiled from specimens gathered chiefly by myself. They are an expansion of a paper already read on 4th February, 1881, before the Society called "The Bryology of the Glenkens," and recorded in the Transactions of that year. It is more difficult to know the Cryptogamic than the Phanerogamic Flora of a district, and workers in this department of Botany are rare. The Glenkens district is rich in Cryptogams, but the neighbourhood of Moffat and Upper Nithsdale should be equally good and productive if systematically worked. As a general rule that district is the richest which is best searched. The list of lowland, alpine, sub-alpine, limestone and sandstone mosses could be largely increased. My sources of information for the following lists are from plants gathered by myself; from specimens sent to me by Mr Charles Scott; Dr W. Nichol's lists of Cryptogams from the Moffat dis-

trict; lists compiled by the late Mr James Cruickshank; and from Cryptogams given in the Moffat Guide Book. Some of the species in these lists require re-confirmation. Doubtful species have been referred for determination to the Rev. John Fergusson, Manse of Fern, and to Henry Boswell, Esq., Oxford. I shall welcome any help given to enlarge the present lists. Mr Joseph Wilson, Windyates, Fife, the late secretary of our Society, also collected a number of mosses, &c., around Dumfries, but I regret that I have not kept any record of names and localities.—*Oct., 1890.*

I have botanized very little in Kirkcudbrightshire during the past summer (1888), but two days' work has enabled me to add the following new records for the County :

1. *Equisetum maximum*—in great abundance in damp places along the shore from Carsluith to Ravenshall.

2. The three forms or varieties of *Arctium lappa*, L. (*Burdock*)—along the same shore. The forms are *Arctium intermedium*, *Arctium minus*, and *Arctium majus*, and a peculiar form *Arctium minus*, which may almost be named *var. subtomentosus*.

3. *Atriplex littoralis*, *var. marina*—along the same shore.

4. *Hordeum pratense*—In abundance along the R. Urr, south of Dalbeattie harbour.

5. *Sclerochloa distans*—by side of R. Urr, opposite the farm of Little Richorn, south of Dalbeattie.

LIST OF MOSSES

Gathered in Dumfriesshire and Kirkcudbrightshire, and numbered according to the London Catalogue of Mosses and Hepaticæ, 2nd Edition, 1881.

N.G. is New-Galloway.

(m) refers to Moffat Guide Book.

(s) refers to Mr CHARLES SCOTT, late of Terregles Gardens.

(c) refers to the late Mr JAMES CRUICKSHANK, Crichton Institution, Dumfries.

(n) refers to a list of Cryptogams of the Moffat District, by Dr W. NICHOL.

The others were gathered by myself.

No.	Name.	Locality.
1	<i>Sphagnum acutifolium</i> , Ehrh ...	Very common
b	„ var. <i>deflexum</i> , Schpr form <i>lilacinum</i> , Spr. (<i>laxum</i> , Russow).	N. of Black Craig, N.G.—frequent Occasionally with the variety
c	„ var. <i>purpureum</i> , Schpr.	Common
d	„ var. <i>rubellum</i> , Wils....	Common
e	„ var. <i>tenue</i> , Braithw....	Barend Moss, Castle-Douglas; Bennan Hill and Moss Raploch, N.G.
f	„ var. <i>quinquefarium</i> , Lindb.	Barend Moss, Castle-Douglas—rare
h	„ var. <i>elegans</i> , Braithw.	Moss Raploch, N.G., &c.—frequent
i	„ var. <i>fuscum</i> , Schpr. ...	Moss Raploch, N.G.; Barend Moss, Castle-Douglas
j	„ var. <i>arctum</i> , Braithw.	N. of Black Craig, N.G.—rare
k	„ var. <i>luridum</i> , Hiibn form <i>pallidum</i>	Cairnsmuir of Carsphairn, &c.—not common Near Craigenbay, N.G.
l	„ var. <i>late-virens</i> Braithw.	Barend Moss, Castle-Douglas—rare
m	„ var. <i>patulum</i> , Schpr.	Dullarg Hill, Balmaclellan.
2	„ <i>fimbriatum</i> , Wils. ...	Barend Moss, Castle-Douglas, &c.
3	„ <i>strictum</i> , Lindb. ..	Bennan Hill, Gairloch, &c., N.G.
4	„ <i>squarrosum</i> , Pers. ...	Colvend, Newabbey; W. side of L. Ken, N.G., &c.
5	„ <i>teres</i> , Angst.	Side of N.G. Station Road; S. of Dykefoot, N.G.
7	„ <i>intermedium</i> , Hoffm.	Side of Newton-Stewart Road, &c., N.G.
b	„ var. <i>riparium</i> , Angst.	N. of Black Craig, &c., N.G.
8	„ <i>cuspidatum</i> , Ehrh. ...	Common; Auchencairn Moss (s); Lochar Moss.
8b	„ var. <i>plumosum</i> , Nees.	N. of Black Craig, N.G.
c	„ var. <i>falcatum</i> , Russ....	Frequent, Burnfoot Hill, N.G.; Barend Moss.
d	„ var. <i>brevifolium</i> , Lindb.	Foot of Craignilder, Darnaw, Kells —rare.
9b	„ <i>molle</i> , var. <i>Mülleri</i> , Schpr.	E. side of Cairn Edward, N.G., &c.
c	„ var. <i>tenerum</i> , Sull. ...	Do.
10	„ <i>rigidum</i> , Schpr. ...	Cairn Edward, &c., N.G.—frequent
b	„ var. <i>compactum</i> , Brid.	Do.; Moffat Hills (m)
c	„ var. <i>squarrosulum</i> , Russ.	Between Cairn Edward and Bennan Hill, N.G.—rare
11	„ <i>subsecundum</i> , Nees....	Common.
b	„ var. <i>contortum</i> , Schultz.	Do.; Knockindock (s)

No.	Name.	Locality.
c	<i>Sphagnum</i> var. <i>obesum</i> , Wils. ...	Burnfoot Hill, N.G.
d	„ var. <i>auriculatum</i> , Schpr.	Do. ; —rare.
12	„ <i>laricinum</i> , Spr. ...	N. of Barlae Plantation, Dalry— rare.
13	„ <i>tenellum</i> , Ehrh. ...	Black Craig, N.G., &c.—frequent.
14	„ <i>Austini</i> , Sull. ...	Moss Raploch, N.G. ; Barend Moss ; Auchencairn Moss.
b	„ var. <i>imbricatum</i> , Horns.	Do., but not so common as the species.
15	„ <i>papillosum</i> , Lindb. ...	N. of Black Craig, &c., N.G.— frequent.
b	„ var. <i>confertum</i> , Lindb.	Between Cairn Edward and Ben- nan Hill, N.G.
c	„ var. <i>stenophyllum</i> , Lindb.	N. of Black Craig, N.G.
16	„ <i>cymbifolium</i> , Ehrh. ...	Very common
b	„ var. <i>congestum</i> , Schpr.	Moss Raploch, &c., N.G.
c	„ var. <i>squarrosulum</i> , Nees.	Do.
17	<i>Andræa petrophila</i> , Ehrh... ..	Black Craig, &c., N.G. ; Criffel (s) ; Moffat (n).
e	„ var. <i>flaccida</i>	N. of Black Craig, N.G.
19	„ <i>alpina</i> , Turn.	Common on the hills ; (s).
20	„ <i>Rothii</i> , W. & M... ..	Do.
30	<i>Gymnostomum rupestre</i> , Schwæg.	Holm Glen, Balmaclellan, &c. ; Moffat (m).
31	„ <i>curvirostrum</i>	Craigs, Dumfries (c) ; Grey Mare's Tail (n).
36	<i>Anæctangium compactum</i>	Kells Hills, about L. Dungcon, N.G. ; Blackhope, Hartfell, Grey Mare's Tail (n).
37	<i>Weissia viridula</i> (<i>controversa</i>)	Very common.
39	„ <i>crispula</i> , Hed.	W. side of Milyea, N.G. ; near Dumfries (c).
40	„ <i>cirrhata</i> , Hedw.	Frequent ; on trees by side of R. Nith ; Terregles (s).
41	<i>Rhabdoweissia fugax</i> , Hedw.	Bankend Rocks, Holm Glen, side of R. Ken, N.G.
42	„ <i>denticulata</i> , Brid.	N. of Black Craig, N.G. ; Dalveen Pass (s) ; Criffel (s) ; Moffat Hills (m).
43	<i>Cynodontium Bruntoni</i>	Kells Hills, N.G.—rare.
44	„ <i>polycarpum</i> , Ehrh.	Rocks S. of Laggan of Dee, N.G. ; Door of Cairnsmuir, Creetown ; N. of Ballingear, N.G. ; Burn- hills (s).
47	<i>Dichodontium pellucidum</i>	Common in sub-alpine glens ; The Glen (s).

No.	Name.	Locality.
b	<i>Dichodontium</i> , var. <i>serratum</i> (<i>flavescens</i>)	In similar places, but not so common; Beld Craig Glen (n).
c	,, var. <i>fagimontanum</i>	Dalveen Pass; on the hills near Terregles; side of Carron Water (s).
51	<i>Dicranella squarrosa</i> , Schrad. ...	Wet hilly places; Durrisdeer (s)
52	,, <i>cerviculata</i> Hedw. ...	Auchencairn Moss; Dalbeattie Moss, &c.
53	,, <i>varia</i> , Hedw. ...	Burnfoot, Kenmure Holms, N.G.; R. Liddel (s); Brownhall (c).
57	,, <i>heteromala</i> Hedw. ...	Common in hilly places and in woods; (s).
58	<i>Dicranum fulvellum</i> , Sm. ...	Hartfell (n).
61	,, <i>Blytii</i> , B. & S. ...	N. of Black Craig and Milyea, N.G.—very rare.
65	,, <i>Scottianum</i> , Turn. ..	Dukieston, N.G.; Colvend.
69	,, <i>fuscescens</i> , Turn. ...	N. of Black Craig, &c., N.G.—frequent.
70	,, <i>scoparium</i> , L ...	Very common; (m) (s).
b	,, var. <i>orthophyllum</i> Schpr.	Dry rocks and boulders—frequent.
c	,, var. <i>paludosum</i> , Schpr.	Boggy places—frequent.
71	,, <i>majus</i> , Turn. ...	Very common on trees and on dykes; (s).
72	,, <i>palustre</i> , Bry., Britt. ...	N.G. hills; Colvend.
75	<i>Dicranodontium longirostre</i> ...	Near Moorbrock, Carsphairn.
78	<i>Campylopus atrovirens</i> , De Not.	On the hills; (s) (c) (n).
79	,, <i>brevipilus</i> , B. & S. ...	Cairn Edward, &c., N.G.
82	,, <i>flexuosus</i> , Brid ...	Common; Cluden; Criffel; Burnhills (s) (c).
83	,, <i>paradoxus</i> , Wils. ...	N. of Black Craig, N.G.
85	,, <i>Schwarzii</i> , Schpr, ...	N. of Black Craig, N.G.; side of R. Ken.
86	,, <i>fragilis</i> , B. & S. ...	Sides of drains, &c.; Burnhills and Criffel (s).
88	,, <i>pyriformis</i> , Brid. ...	Bennan Hill, N.G., &c.; Terregles (s)—frequent.
90	<i>Leucobryum glaucum</i> ...	Very common on hills and moors; Criffel, in fruit (c).
92	<i>Pleuridium nitidum</i> ...	Kenmure Holms, N.G.
93	,, <i>subulatum</i> , L. ...	Frequent on the ground; Terregles (s) (c).
94	,, <i>alternifolium</i> , L. ...	Do. Powder Magazine (c).
96	<i>Seligeria pusilla</i> , Hedw. ...	Penton Linns (s).
100	,, <i>recurvata</i> , Hedw. ...	E. of Crummy Park and Allangibbon Bridge, N.G.
105	<i>Blindia acuta</i> , Hedw. ...	Frequent on the hills; Dalveen Pass and Criffel (s).

No.	Name.	Locality.
108	<i>Sphærangium muticum</i>	Terregles (s).
110	<i>Phascum cuspidatum</i>	Fields and gardens—common.
116	<i>Pottia truncata</i> , L.	Common on mud walls and by roadsides ; (c.)
123	„ <i>Heimii</i> , Hedw.	Colvend shore ; S. of Caerlaverock.
128	<i>Didymodon rubellus</i>	Common ; Dumfries (s) ; Moffat (n)
b	„ var. <i>serratulus</i> , Ferg.	On R. Ken, near Dundeugh, Dalry.
130	„ <i>flexifolius</i> , Dicks.	Little Richorn Wood, Dalbeattie, &c.
131	„ <i>cylindricus</i> , Wils.	Black Craig, N.G. ; Criffel (s)—frequent.
136	<i>Ditrichum homomallum</i>	About Kenmure, &c., N.G. ; Durrisdeer (s).
141	<i>Trichostomum tophaceum</i>	Garpel Bridge, N.G.—rare.
142	„ <i>mutabile</i> , Br.	Dullarg Hill, Balmaclellan ; Colvend shore ; Durrisdeer (s)—frequent.
143	„ <i>crispulum</i> , Bruch.	Colvend shore.
145	„ <i>nitidum</i> , Lindb.	Do.
147	„ <i>littorale</i> , Mitt.	Do.
157	<i>Barbula muralis</i> , L.	Very common on limestone walls.
158	„ <i>unguiculata</i> , Dill.	Do. (s) (c).
159	„ <i>fallax</i> , Hedw.	Roadsides and waste ground ; Cluden (s) (c).
160	„ <i>recurvifolia</i> , Schpr.	Penton Linns (s).
162	„ <i>rigidula</i> , Dicks.	Walls—frequent.
163	„ <i>spadicea</i> , Mitt.	Ken Bridge, N.G.
164	„ <i>cylindrica</i> , Tayl.	Kenmure Castle, N.G.
167	„ <i>revoluta</i> , Schwæg.	Limestone walls.
168	„ <i>convoluta</i> , Hedw.	Do.
170	„ <i>inclinata</i> , Schwæg.	Colvend shore—very rare.
171	„ <i>tortuosa</i> , Schwæg.	On the hills ; The Glen (s)—frequent.
176	„ <i>subulata</i> , L.	Dumfries ; Routen Bridge, Terregles (s) ; N.G.
177	„ <i>lœvipila</i> , Brid.	The Holm, N.G. ; The Glen, and Terregles (s).
179	„ <i>ruralis</i> , L.	Roofs of houses (s) (c).
	„ var. <i>arenicola</i> , Braithw.	Sandy sea-shores.
180	„ <i>intermedia</i> , Brid.	Threave Castle, Castle-Douglas.
181	„ <i>papillosa</i> , Wils.	On old trees—frequent.
184	<i>Ceratodon purpureus</i> , L.	Very common.
185	<i>Distichium capillaceum</i>	R. Ken, N.G. ; Nith and Cairn (s) (c) ; Grey Mare's Tail (n).
190	<i>Eucalypta ciliata</i> , Hedw.	Head of Blackhope Burn (n).
191	„ <i>streptocarpa</i> , Hedw.	Glenlee, N.G. ; The Holm ; Durrisdeer ; Lochanhead ; Penton Linns (s) ; Routen Bridge (c) ; Moffat (n).

No.	Name.	Locality.
193	<i>Grimmia apocarpa</i> , L. ...	Common on dykes and stones (c)(s).
b	„ var. <i>rivulare</i> , Brid. ...	On stones in streams, as R. Ken ; Garpel Burn, N.G. ; The Glen.
194	„ <i>maritima</i> , Turn. ...	Common on rocks all along the shore.
198	„ <i>pulvinata</i> , Dill. ...	Common on walls ; Brownhall (c).
199	„ <i>Schultzii</i> , Brid. ...	Cairn Edward and Bennan Hills, N.G. ; Criffel (s).
201	„ <i>contorta</i> , Wahl. ...	W. of Millyea, N.G.—very rare.
202	„ <i>torquata</i> , Grev. ...	Millyea, &c., N.G. ; Whitcomb (n)
203	„ <i>unalis</i> (<i>spiralis</i>) ...	Milyea, &c., N.G. ; Screel (s) ; Whitcomb (n).
205	„ <i>subsquarrosa</i> , Wils. ...	Colvend ; on Bennan Farm, N.G.
206	„ <i>trichophylla</i> , Grev. ...	Common on dykes, wall tops, rocks, &c. (s) (c).
207	„ <i>Hartmanni</i> , Schpr. ...	Frequent by side of R. Ken and R. Dee, N.G.
209	„ <i>Doniana</i> , Sm. ...	On whinstone on the hills ; Durrisdeer (s) ; Moffat (m).
b	„ var. <i>Sudetica</i> ...	Along with the species.
212	„ <i>commutata</i> , Hiibn. ...	L. Stroan, on R. Dee, N.G.—very rare.
213	„ <i>montana</i> , B. & S. ...	Garrorie, N.G.—very rare.
218	„ <i>Stirtoni</i> , Schpr. ...	On dykes by roadsides, N.G. and Dalry.
220	<i>Rhacomitrium patens</i> ...	S.-W. side of Milyea, N.G. ; Blackhope Burn (n).
221	„ <i>ellipticum</i> , Turn. ...	Frequent on the hills, as on Black Craig, N.G.
222	„ <i>aciculare</i> , L. ...	Common on wet rocks, &c. ; Routen Bridge and Criffel (s).
224	„ <i>Sudeticum</i> , Funck ...	Common on rocks on the hills ; Burnhills (s).
225	„ <i>heterostichum</i> ...	Very common on dykes, &c.
b	„ var. <i>alopecurum</i> ...	W. of Cairn Edward, N.G.
226	„ <i>fasciculare</i> , Schrad. ...	Common on rocks and dykes ; Criffel (c).
227	„ <i>lanuginosum</i> , Hedw. ...	very common on the hills, &c. (s) (c).
228	„ <i>canescens</i> , Hedw. ...	Common on sandy places by roadsides, &c.
b	„ var. <i>ericoides</i> ...	Side of Newton-Stewart Road, &c., N.G.
230	<i>Ptychomitrium polyphyllum</i> ...	Dykes and dry rocks (s) (c).
231	<i>Amphoridium lapponicum</i> ...	Milyea, N.G. ; Blackhope Burn (n)—rare.
232	„ <i>Mougeotii</i> , B. & S. ...	Wet rocks and sub-alpine glens ; in fruit at Dob's Linn, Moffat, by Mr W. Bell ; Inglestone (s).

No.	Name.	Locality.
233	<i>Zygodon viridissimum</i> , Dicks. ...	Trees and on sheltered dykes—frequent.
b	„ var. <i>rupestris</i> (Stirtoni)	Holme, Balmaclellan ; Troquhain—rare.
234	„ <i>conoideus</i> , Dicks. ...	Ballingear Wood, N.G. ; Creetown Glen ; Friars' Carse (c).
237	<i>Ulota Drummondii</i> , Grev. ...	Hannahstown Wood, N.G. ; Beld Craig (n)—very rare.
239	„ <i>Bruchii</i> , Horn. ...	Common on young oaks and hazels, &c.
241	„ <i>crispa</i> , Hedw. ...	Do. ; Moffat (m) ; Brownhall (c).
242	„ <i>intermedia</i> , Schpr. ...	Do.
243	„ <i>crispula</i> , Bruch. ...	Not so common.
244	„ <i>phyllantha</i> , Brid. ...	Common on trees ; Terregles (s).
245	„ <i>Hutchinsiae</i> , Sm. ...	W. of Bennan and Cairn Edward hills, N.G. ; Criffel (c).
247	<i>Orthotrichum saxatile</i>	Ken Bridge, N.G. ; Rerrick ; Terregles Village (s) ; Brownhall (c)
248	„ <i>cupulatum</i> , Hoffm.	Friars' Carse (c).
251	„ <i>rupestre</i> , Schleich.	On a dyke between Carlingwark Loch and R. Dee, Castle-Douglas ; Knocklae, Balmaclellan, &c.
253	„ <i>affine</i> , Schrad. ...	Common on trees and on dykes.
254	„ <i>fastigiatum</i> , Br. ...	Garroch Wood, N.G.—very rare.
257	„ <i>stramineum</i> , Horn.	Common on trees.
261	„ <i>diaphanum</i> , Schrad.	At the foot of damp trees and walls ; Terregles (s) ; Brownhall (c).
262	„ <i>pulchellum</i> , Sm. ...	Overton and Burnfoot, &c., N.G. ; The Glen (s) ; Brownhall (c).
263	„ <i>Lyellii</i> , H. & T. ...	Common on trees, in woods, &c. ; Terregles (s).
264	„ <i>leiocarpum</i> , B. & S.	Frequent on trees ; Terregles (s) ; Brownhall (c).
266	„ <i>rivulare</i> , Turn. ...	Kenmure Holms, N.G. ; Burnhills (s).
267	<i>Edipodium Griffithianum</i> ...	S. of L. Dungeon, and on Milyea, N.G. ; Cairnsmuir of Carsphairn ; Blackhope Burn (n).
271	<i>Tetraplodon mnioides</i> ...	On dung on the hills—occasionally
272	<i>Splachnum sphericum</i> ...	S. of L. Dungeon, N.G. ; Lochar Moss (c)—very rare.
274	„ <i>ampullaceum</i> , L. ...	Frequent on dung, as at Little Barskeoch, &c., N.G. ; Knockindock (s).
282	<i>Physcomitrium pyriforme</i> , L. ...	Kenmure Holms, N.G. ; Terregles (s)
283	<i>Entosthodon ericetorum</i> , Bals. ...	Sides of drains, &c., on the hills—frequent ; Grey Mare's Tail (n).

No.	Name.	Locality.
184	<i>Entosthodon Templetoni</i> , Hook	Side of rocks by R. Ken, &c., N.G.
285	<i>Funaria fascicularis</i> , Dicks. ...	Fields about N.G. ; Kirkeudbright ; Terregles (s) ; Brownhall (c).
287	,, <i>hygrometrica</i> , L. ...	Common.
294	<i>Bartramia ithyphylla</i> , Brid. ...	Sides of R. Ken ; Milyea, N.G. ; The Grove and Terregles (s).
295	,, <i>pomiformis</i> , L. ...	Frequent ; Cairn Water (s) ; Moffat (m).
b	,, <i>var. crispa</i> , Swartz ...	N. of Black Craig, N.G.
296	,, <i>Halleriana</i> , Hedw. ...	Side of R. Ken at Dundeuigh ; Crummypark Burn, N.G.—rare.
302	<i>Philonotis fontana</i> , L. ...	Frequent in wet places and in springs ; Moffat (m) (s).
305	<i>Breutelia arcuata</i> , Dicks....	On the hills ; Moffat (m) (s)—common
308	<i>Leptobyrum pyriforme</i> , L. ...	Kenmure Castle, on limestone road walls ; Cluden, Terregles (s) ; often in flower pots.
310	<i>Webera polymorpha</i> , Hoppe. ...	Milyea, N.G. ; Whitcomb and Beld Craig (n)—very rare.
311	,, <i>elongata</i> , Dicks....	S. of L. Dungeon and Milyea, N.G.
312	,, <i>nutans</i> , Schreb. ...	Common on moors ; Durrisdeer (s)
313	,, <i>cruda</i> , Schreb. ...	Holme Glen, N. of Black Craig, N.G.
314	,, <i>annotina</i> , Hedw. ...	Common in damp fields and by roadsides—barren.
316	,, <i>carnea</i> , L. ...	Brownhall (c) ; R. Esk (s).
317	,, <i>albicans</i> , Wahl. ...	HolmeGlen, N.G.—veryrare ; Beld Craig (n).
318	<i>Zieria julacea</i> , Schpr. ...	S. of L. Dungeon, N.G. ; Moffat (c) ; Whitcomb and Beld Craig (n).
330	<i>Bryum bimum</i> , Schreb. ...	Marshy places ; Whitehills, Terregles ; Dalveen, Durrisdeer (s).
336	,, <i>atropurpureum</i> , W. & M.	On the hills on wet rocks—occasionally.
337	,, <i>alpinum</i> , L. ...	Frequent on the hills, but rare in fruit ; Bengairn (s) ; Criffel (s).
338	,, <i>cæspiticium</i> , L. ...	On limestone dykes, &c.—common.
339	,, <i>argenteum</i> , L. ...	On roofs of houses and on the ground—common (s) (c).
341	,, <i>capillare</i> , L. ...	On walls, trees, &c.—very common.
345	,, <i>pallens</i> , Swartz. ...	Kells Hills, N.G. ; Cairn Water and Burnhills (s) ; common on Moffat Hills (n).
348	,, <i>Duvalii</i> , Voit. ...	Head of stream forming the mineral well, Moffat.

No.	Name.	Locality.
349	<i>Bryum pseudo-triquetrum</i> , Hedw.	Wet rocks, &c., on the hills, but not common; Dalveen (s).
383	„ <i>roseum</i> , Schreb. ...	Woods about N.G.
354	„ <i>filiforme</i> (julaceum) ...	Sides of hill streams, &c.; Criffel and Burnhills (s).
357	<i>Mnium cuspidatum</i> , Hedw. ...	Holm, Balmaclellan; N. of Kenmure Castle; Parton, &c.
358	„ <i>affine</i> , Bland. ...	Common at foot of walls, &c.; Terregles (s).
359	„ <i>undulatum</i> , Hedw. ...	Frequent in woods and on lawns, &c.; Terregles (s).
360	„ <i>rostratum</i> , Schrad. ...	sub-alpine glens, as Holm Glen, N.G., &c.
361	„ <i>hornum</i> , L. ...	Common (s).
362	„ <i>serratum</i> , Schrad. ...	S. of L. Dungeon and N. of Black Craig, N.G.
366	„ <i>stellare</i> , Hedw. ...	S. of L. Dungeon and Holme Glen, N.G.; Hartfell (n).
368	„ <i>punctatum</i> , Hedw. ...	Common in sub-Alpine glens, &c.
369	„ <i>subglobosum</i> , B. & S. ...	N. of Black Craig, &c., N.G.; Hartfell (n)—not common.
370	<i>Aulacomnium androgynum</i> ...	Bankend rocks, N.G.—very rare.
371	„ <i>palustre</i> , L. ...	Marshy places—common (s).
375	<i>Tetraphis pellucida</i> , L. ...	Bennan Hill, Ballingear Wood, &c., N.G.; Crichton (s).
376	„ <i>Brownianum</i> , Dicks. ..	Raehills Woods (Greville's Scottish Cryptogamic Flora, 1823); Penton Linns on R. Liddel (s); Beld Craig (n).
377	<i>Oligotrichum hercynicum</i> ...	On bare soil on the hills; L. Dungeon, N.G.; Hartfell (n).
378	<i>Atrichum undulatum</i> , L. ...	Common; Terregles (s).
382	<i>Pogonatum nanum</i> , Neck. ...	In fields and on banks; The Grove (s); Moffat (m); Dumfries (c).
383	„ <i>aloides</i> , Hedw. ..	Very common in fields and on banks, and sides of ditches.
b	„ <i>var. minus</i> (Dicksoni).	Waulkmill Farm, N.G.—rare.
384	„ <i>urnigerum</i> , L. ...	Common on clayey and loamy banks; Moffat (m); Terregles and Routen Bridge (s); Dumfries (c).
385	„ <i>alpinum</i> , L. ...	N. of Black Craig, N.G.; Cairns-muir of Carsphairn; Moffat hills (n) and (m).
387	<i>Polytrichum gracile</i> , Menz. ...	N. of Black Craig, N.G.; Terregles (s).
388	„ <i>formosum</i> , Hedw. ..	Common on the hills by sides of drains, &c.

No.	Name.	Locality.
289	<i>Polytrichum piliferum</i> , Schreb.	Frequent on dry banks; woods near Dumfries (c); Terregles (s).
390	„ <i>juniperum</i> , Willd.	Top of Milyea, N.G.; Terregles Woods (s).
391	„ <i>strictum</i> , Banks. ...	Frequent in bogs, as N. of Black Craig, N.G.; Dalveen (s).
392	„ <i>commune</i> , L. ...	Common on hills and woods and bogs.
d	„ <i>var. fastigiatum</i> , Lyle.	Opposite Darsalloch, N.G.
393	<i>Diphyscium foliosum</i> , L. ...	Frequent on banks in hilly parts; Dalveen Pass, and Burnhills (s).
394	<i>Buxbaumia aphylla</i> , Hall. ...	On rocks in a field N. of Ballingear, N.G.—very rare.
396	<i>Fissidens bryoides</i> , Hedw. ...	Common; Terregles (s); Brown-hall (c).
405	„ <i>osmundoides</i> , Hedw. ...	Frequent on Kells hills.
407	„ <i>decipiens</i> , De Not. ...	Do.
408	„ <i>adiantoides</i> , Hedw. ...	Do. The Glen (s); Craigs (c).
409	„ <i>taxifolius</i> , L. ...	Frequent; Whitehills and Terregles (s); Banks of R. Nith (c).
412	<i>Cinclidotus fontinaloides</i> , Hedw.	R. Ken, &c., N.G.; Routen Bridge; The Glen (s); Friars' Carse (c).
413	<i>Fontinalis antipyretica</i> , L. ...	Frequent, Carron Water and Dalveen Pass (s).
414	„ <i>squamosa</i> , L. ...	Garpel Burn and R. Ken, &c., N.G.
415	<i>Hedwigia ciliata</i> , Dicks. ...	Dykes, rocks, &c.; Irongray (c) (s).
c	„ <i>var. viridis</i> , Schpr. ...	S. of Laggan of Dee and near N.G.
417	<i>Cryphea heteromalla</i> , Hedw. ...	Back of Kenmure Castle, &c., N.G.; Tongland; Rosebank (c).
419	<i>Leucodon sciuroides</i> , L. ...	Kirkgunzeon Manse; Douglas Hall; Terregles (s); Friars' Carse (c).
b	„ <i>var. morensis</i> , Brid. ...	The Holme, Balmaclellan.
421	<i>Antitrichia curtipendula</i> ...	In woods on trees and dykes, &c.; The Grove (s); Dalveen (s)
423	<i>Neckera pumila</i> , Hedw. ...	Common on trees; Terregles and Burnhills (s).
b	„ <i>var. Philippeana</i> , Schpr.	Not common; Kenmure Castle, N.G.
424	„ <i>crispa</i> , L. ...	Frequent; Moffat (m); The Glen and Burnhills (s); Dalscairth (c).
425	„ <i>complanata</i> , L. ...	Frequent on trees, &c.
426	<i>Homalia trichomanoides</i> ...	Foot of trees, &c.; The Glen and Terregles (s).

No.	Name.	Locality.
429	<i>Pterygophyllum lucens</i> ...	Glenlee, Ballingear Woods, &c., N.G.; Grey Mare's Tail (n); Dalscairth (c).
431	<i>Myrinia pulvinata</i> , Wahl. ...	Kenmure Holms, N.G.—very rare.
434	<i>Leskea polycarpa</i> , Ehrh. ...	Very common on trees overflowed, as in Kenmure Holms, N.G.; Terregles Meadows (s).
437	<i>Anomodon viticulosus</i> , L. ...	Kenmure Castle, N.G.; Ravenshall, Creetown; R. Dee, Tongland; Maidenbower, Dumfries (s); The Glen (s) (c).
440	<i>Pseudoleskea catenulata</i> , Brid. ...	Blackhope Burn (n).
442	<i>Heterocladium heteropterum</i> ...	Frequent in sub-alpine glens; Routen Bridge and The Glen (s); Blackhope Burn and Whitcomb in fruit.
443	<i>Thuidium tamariscinum</i> ...	Very common in woods and on banks (m) (s).
448	<i>Pterigyandrum filiforme</i> , Timm.	N. of Allangibbon Bridge, Dalry; on R. Ken, N.G.
449	<i>Pterogonium gracile</i> , Dill. ...	On rocks and trees, generally near water; The Glen (s).
451	<i>Thannium alopecurum</i> , L. ...	Very plentiful in sub-alpine glens (s) (c) (m).
452	<i>Climacium dendroides</i> , L. ...	Damp grassy places; Terregles; in fruit (s); in Mayfield marshes (c); Kenmure Holms in fruit.
453	<i>Pylaisia polyantha</i> , Schreb. ...	The Holme, Balmaclellan—very rare.
454	<i>Isothecium myurum</i> , Poll. ..	Very common on tree roots and on rocks; (s).
457	<i>Homalothecium sericeum</i>	Very common on trees and on dykes; (s).
460	<i>Scleropodium caespitosum</i> , Wils.	Kenmure Holms, N.G.
464	<i>Bracythecium glareosum</i>	Penton Linns on R. Liddel (s).
466	„ <i>albicans</i> , Neck.	Whiteport Bay, Almorness; Durrisdeer, and near Newabby, &c. (s)—frequent.
467	„ <i>velutinum</i>	Rerrick; Balmaclellan; Terregles (s)—frequent.
471	„ <i>rutabulum</i> , L.	Very common; (m) (s).
473	„ <i>rivulare</i> , B. & S.	Common; The Glen and by R. Cairn (s).
474	„ <i>populeum</i> , Hedw.	Very common; (s).
475	„ <i>plumosum</i> , Swartz.	Common by sides of streams.
476	<i>Eurhynchium myosuroides</i>	Common on rocks and trees; (s)
480	„ <i>striatum</i> , Schreb....	Common in woods; Terregles (s).

No.	Name.	Locality.
481	<i>Eurhynchium crassinervium</i> , Tayl.	Kenmure Castle, N.G. ; Holme Glen, Balmaclellan ; The Glen and Penton Linns (s).
482	„ <i>piliferum</i> , Schreb.	Common in woods, &c. ; The Cluden (s).
485	„ <i>Swartzii</i> , Turn. ...	Common in glens under shade ; (s).
486	„ <i>prælongum</i> , Dill. ...	Very common (s).
b	„ var. <i>Stokesii</i> , Turn.	Holme Glen, Balmaclellan.
487	„ <i>pumilum</i> , Wils. ...	Sub-alpine glens ; The Glen (s).
489	<i>Hyocomium flagellare</i>	In hill burns under rocks ; Lowran burn, N.G., in fruit.
490	<i>Rhynchostegium tenellum</i> ..	Dundrennan Abbey ; Spout Glen, Twynholm ; Cairn Water and Cluden Water (s).
492	„ <i>depressum</i> , Bruch.	Holme Glen, Balmaclellan ; Spout Glen ; The Glen (s).
493	„ <i>confertum</i> , Dicks.	Frequent on walls and stones ; Kells Church, N.G.
496	„ <i>ruscifolium</i> ...	Common in burns, ditches, &c. (s).
499	<i>Plagiothecium pulchellum</i> ...	Frequent on shaded rocks in glens and on the hills ; Dalscairth (c).
501	„ <i>denticulatum</i> ...	Common in woods on shady banks, &c. (s) (c).
502	„ <i>Borrerianum</i> , Spr.	Frequent in places similar to 501.
503	„ <i>sylvaticum</i> , L. ...	Holme Glen, Balmaclellan ; near Glenlee, N.G.
c	„ var. <i>orthocladum</i> ,	Near Kenmure Castle stables, N.G.
504	„ <i>undulatum</i> , L. ...	In woods below trees, &c. ; The Glen (s).
509	<i>Amblystegium serpens</i> , L. ...	Very common at roots of trees, on dykes and walls (s) (c).
511	„ <i>irriguum</i> , Wils. ...	Garpel Bridge, N.G.—rare.
512	„ <i>fluviale</i> Swartz. ...	N.G. ; Durrisdeer (s).
513	„ <i>riparium</i> , L. ...	Kenmure Holms, N.G.—not com- mon.
515	<i>Hypnum exannulatum</i> , Güm. ...	Frequent in wet marshy places ; Screel (s).
520	„ <i>revolvens</i> , Swartz. ...	Do. (s).
521	„ <i>fluitans</i> , L. ...	Do.
522	„ <i>uncinatum</i> , Hedw. ...	On tree roots by R. Ken, N.G., &c. in dry places.
523	„ <i>filicinum</i> , L.	Common in sub-alpine glens and by wet roadsides.
b	„ var. <i>vallisclausæ</i> ...	Tongland, R. Dee.
524	„ <i>commutatum</i> , Hedw. ...	Frequent on wet dripping rocks ; Terregles (s) (c).
526	„ <i>falcatum</i> , Brid.	Dullarg Hill, Balmaclellan, &c.— frequent.

No.	Name.	Locality.
535	<i>Hypnum cupressiforme</i> , L. ...	Very common.
b	„ <i>var. tectorum</i> , Schpr.	On roofs of houses—common.
535c	„ <i>var. filiforme</i> , Bry. Eur.	Trunks of trees.
d	„ <i>var. ericetorum</i> , Bry. Eur.	Among heather.
536	„ <i>resupinatum</i> , Wils. ...	Holme, Balmaclellan ; Kenmure Castle, N.G. ; Terregles (s).
537	„ <i>patientiæ</i> , Lindb. ...	Wet roadsides, &c. ; Durrisdeer (s).
538	„ <i>molluscum</i> , Hedw. ...	Frequent in damp places ; Terregles (s).
539	„ <i>crista-castrensis</i> ...	Grey Mare's Tail (m) (n).
540	„ <i>palustre</i> , L. ...	Sub-alpine glens ; The Glen (s) ; Routen Bridge (s).
543	„ <i>eugyrium</i> , Schp. ...	Holme Glen, N.G. ; Grey Mare's Tail (n)—very rare.
545	„ <i>ochraceum</i> , Turn. ...	Mountain rivulets ; R. Deugh, Carsphairn ; Dalveen Pass and Cairn Water (s).
548	„ <i>polymorphum</i> , Hedw... ..	Holme Glen, Balmaclellan—very rare.
549	„ <i>elodes</i> , Spr.	In meadows between Carlingwark Loch and R. Dee, Castle-Douglas—very rare.
552	„ <i>stellatum</i> , Schreb. ...	Wet places on the hills ; Criffel (s).
553	„ <i>cordifolium</i> , Hedw. ...	Among grass ; Kenmure Holms, N.G. ; Terregles (s) ; Irongray (c).
554	„ <i>giganteum</i> , Schpr.	Simpson's Bog, Tongland ; Larg Hill, Creetown ; Barnmurray Moor, Balmaclellan—not common.
555	„ <i>sarmentosum</i> , Wahl. ...	Frequent in wet places on the hills ; Knockindock (s).
b	„ <i>var. subflavum</i> , Ferg... ..	Occasionally on the hills ; Burnfoot Hill, N.G.
526	„ <i>cuspidatum</i> , L. ...	Common in wet marshy places (s).
557	„ <i>Schreberi</i> , Ehrh. ...	Very common in woods and on the hills (s) (c).
558	„ <i>purum</i> , L. ...	Very common among grass (s) (c)
559	„ <i>stramineum</i> , Dicks. ...	Frequent in marshy places.
561	„ <i>scorpioides</i> , L. ...	Wet places on the hills ; Bengairn, (s), &c.
562	„ <i>splendens</i> , Dill. ...	Very common on banks, woods, &c. (s).
565	„ <i>brevirostrum</i> , Ehrh. ..	Common in woods ; Dalscairth (s).
566	„ <i>squarrosum</i> , L. ...	Very common among grass (s).
567	„ <i>loreum</i> , L. ...	Ballingear Wood, &c., N.G. ; Crichepe Linn and Terregles (s).
568	„ <i>triquetrum</i> , L. ...	Very plentiful on the ground in woods (s) (c) (m).

LIST OF HEPATICÆ.

N.G. refers to New-Galloway.

(n) refers to Notes on a List of Cryptogamic Plants collected by Dr W. NICHOL in the Moffat district.

(c) to a List of Jungermanniæ observed in the neighbourhood of Dumfries by the late Mr JAMES CRUICKSHANK, Crichton Institution, and published in the *Phytologist*, No. XIV., July, 1842.

(s) to a List of Hepaticæ gathered in the neighbourhood of Dumfries by Mr CHARLES SCOTT, late of Terregles Gardens.

The rest, without letters, were gathered by myself.

No.	Name.	Locality.
1	<i>Marchantia polymorpha</i> , L.	... Common in damp places at foot of walls, &c. (s) (c).
2	<i>Preissia commutata</i> , Nees.	... Wet rocks in sub-alpinè glens (s); W. of Cluden; Burnhills, &c.
3	<i>Conocephalus conicus</i> , L...	... (s) Glen at Terregles; Grove pond; rocks by R. Cairn; (c) Old College; Dalscairth.
4	<i>Asterella hemispherica</i> , L.	... Back of Kenmure Castle, N.G.; rocks at Grennan, Dalry; about Kirkeudbright.
8	<i>Riccia glauca</i> , L. ...	... Delarran Holm, N.G., &c.
10	„ <i>crystallina</i> ...	... (c) Brownhall Orchard.
13	„ <i>bifurca</i> (?) Bisch. ...	... Burnfoot Hill, N.G.
19	<i>Frullania dilata</i> , L. ...	... Common on trees (s) (c).
22	„ <i>Tamarisci</i> (Mich.) ...	... Do. (s) (c).
29	<i>Lejeunea minutissima</i> , sm.	... Burnfoot Hill, N.G.—very rare.
32	„ <i>serpyllifolia</i> , Mich.	... Frequent in glens; (c) Craigs, Dumfries, &c.; Grey Mare's Tail (n).
33	„ <i>patens</i> , Lind. ...	... Do.
34	„ <i>flava</i> , Sw. ...	... Do. Inglestone Hill (s).
35	„ <i>Mackaii</i> (Hook) ...	... R. Dee, Tongland—very rare.
36	<i>Radula complanata</i> , L. ...	... Roots of trees, stones, dykes, and under hedges (c) (s).
41	<i>Porella lævigata</i> , Schrad. ...	... Frequent in sub-alpine glens (c) (s).
42	„ <i>platyphylla</i> , L. ..	... Do. do.
44	„ <i>rivularis</i> , Nees. ...	... Back of Kenmure Castle, N.G.; Ironmacannie Mill, Balmaclellan.
46	<i>Pleurozia cochleariformis</i>...	... Frequent in damp places on the hills, as Black Craig, N.G.; Auchencairn Moss (s).
47	<i>Lepidozia reptans</i> , L. ....	... Frequent on banks and decayed roots of trees, as in Ballingear Glen, N.G. (s); Crichope Linn (c); Routen Bridge; Dalscairth

No.	Name.	Locality.
49	<i>Lepidozia setacea</i> , Mitten	... Frequent in bogs and on damp banks on the hills (n); moors near L. Skene, Moffat (s); Crichope Linn (c); Lochar Moss; Criffel.
50	<i>Bazzania trilobata</i> , Budd.	... Frequent, as in Ballingear Wood, &c., N.G.; Penton Linns; R. Esk; Dumfries (s).
51	„ <i>tricrenata</i> , Wahl.	... N. of Black Craig, N.G.
53	<i>Odontoschisma Sphagni</i> , Dicks.	... Frequent in bogs on sphagnum(s); Auchencairn Moss; marshes about Terregles (c); Criffel, &c.
54	„ <i>denudatum</i> , Nees.	... Occasionally on damp places on moors, as at Barmurray, Balmaclellan.
56	<i>Cephalozia Francisci</i>	... (c) Roadside between Rosehall and Brownhall.
57	„ <i>obtusiloba</i> , Lindb.	... Barend Moss, near Castle-Douglas—rare.
61	„ <i>byssacea</i>	... (c) Marsh above Routen Bridge.
62	„ <i>divaricata</i> (Starkii)	... Frequent on shady dykes in woods about N.G.
b	„ var. <i>Pearsoni</i> , Lindb.	... N. of Black Craig, N.G.—very rare.
64	„ <i>bicuspidata</i> , Dum.	... Common; (c) Lochar Moss; (s) The Glen; (n) the Beld Craig.
65	„ <i>Lammersiana</i> , Hübn.	... N. of Black Craig, N.G.; Barend Moss.
66	„ <i>curvifolia</i> , Dicks.	... Dunveoch Glen and near Garroch, N.G.—not common.
67	„ <i>connivens</i> , Dicks.	... Glenlee Glen, N.G.; Barend Moss; above Routen Bridge and Crichope Linn (c).
69	„ <i>catenulata</i> , Hübu.	... N. of Black Craig, N.G.; Colvend.
71	<i>Lophocolea bidentata</i> , L.	... Common; (s) (c).
72	„ <i>heterophylla</i> , Schrad.	... Frequent; Powder Magazine, Dumfries (c); Grey Mare's Tail (n); N.G.
75	<i>Chiloscyphus polyanthos</i> , L.	... West Risk, &c., N.G.; Holme Glen; Durrisdeer (s); Terregles (c).
78	<i>Saccogyna viticulosa</i> , Mich.	... Wet rocks; Lochar Moss (c); Bennan Hill, &c.
79	<i>Kantia trichomanis</i> , L.	... Crichope Linn (s); Dalscairth (c); N.G.
82	<i>Trichocolea tomentella</i> , Ehr.	... Wet places; Glenlee Wood, &c., N.G.; Dalscairth (c).

No.	Name.	Locality.
83	<i>Blepharozia ciliaris</i> , Nees.	... Knockgray Moor, Carsphairn ; Barlae Wood, Dalry ; Dalscairth (c) ; Dalveen (s).
86	<i>Anthelia julacea</i> , (L.), Lightf.	... Wet places and rocks on the hills.
88	<i>Blepharostoma trichophyllum</i>	... Holme Glen ; Ballingear Glen ; Routen Bridge ; Dalscairth ; and Moffat Hills (c) ; Grey Mare's Tail (n).
89	<i>Scapania compacta</i> , Dum.	... Frequent.
92	„ <i>undulata</i> , Dill.	... On the hills ; Inglestone (c) ; Ben- gairn (s).
93	„ <i>uliginosa</i> , Nees.	... Carlone's Cairn, Carsphairn ; Whit- comb (n).
94	„ <i>irrigua</i> , Nees	... Barend Moss, Castle-Douglas.
95	„ <i>nemorosa</i> , L.	... Frequent ; Beld Craig (n) ; Friars' Carse (c).
96	„ <i>resupinata</i> , Dum.	... Frequent on rocks on the hills and on dykes in woods ; side of road, Lochar Moss (c).
97	„ <i>purpurea</i> (Dill.), Carr.	... Occasionally on the hills ; Criffel (c) ; Hartfell and Grey Mare's Tail (n).
99	„ <i>aquiloba</i> , Schwag.	... N. of Black Craig, N.G., &c.
102c	„ <i>curta</i> , var. <i>rosea</i> , Nees.	... Ballingear Glen ; Black Craig ; Viewfield Farm, on rocks, N.G. —very rare.
103	<i>Diplophyllum albicans</i> , L.	... Very common ; Crichope Linn (s), &c.
104	„ <i>Dicksoni</i> , Hook.	... Blackbank dykes, Glenlee, and N. of Black Craig, &c., N.G.
106	<i>Plagiochila asplenioides</i> , L.	... Very common in woods on banks, &c. (c) (s).
107	„ <i>spinulosa</i> , Dicks.	... Frequent on rocks and banks in hills and woods (c) (s).
b	„ var. <i>microphylla</i> , Carr.	... N. of Black Craig, N.G.
108	„ <i>punctata</i> , Tayl.	... Glenlaggan Hill, Parton ; Burn- foot Hill, N.G.—rare.
109	„ <i>tridenticulata</i> , Tayl.	... Grey Mare's Tail (n).
112	<i>Mylia Taylori</i> , Hook	... N. of Black Craig, N.G. ; Barend Moss, Castle-Douglas ; moors at L. Skene (n).
113	„ <i>anomala</i> , Hook	... N. of Black Craig, &c., N.G. ; Lochar Moss (c).
114	<i>Eucalyx obovata</i> , Nees.	... Opposite Waulk Mill, N.G.—rare.
115	„ <i>hyalina</i> , Lyell	... Routen Bridge ; Closeburn ; near Moffat Spa Well (c).
117	<i>Aplozia Schraderi</i> , Mart.	... Troquhain Wood, Balmaclellan ; Blackbank dyke, Glenlee, N.G. —very rare.

<i>No.</i>	<i>Name.</i>	<i>Locality.</i>
118	<i>Aplozia crenulata</i> , Sm. ...	Roadsides, &c.; Glen Mills and Goldielea (c); Grey Mare's Tail (n).
118b	„ var. <i>gracillima</i> , Sm., (<i>Genthiana</i> , Hübn.)	Common on damp soil.
120	„ <i>pumila</i> , With. ...	Glenlee Glen, &c., N.G.; Moffat (n); Dalscairth (c).
122	„ <i>cordifolia</i> , Hook. ...	Dalveen (s); Criffel (c); Blackhope Glen (n).
123	„ <i>riparia</i> , Tayl. ...	Wet rocks in glens; Holme Glen; The Glen.
124	<i>Lophozia Bantriensis</i> , Hook. ...	Crummy Park Glen and Ballingear Glen, N.G.—rare.
129	„ <i>barbata</i> , Schr. (<i>Schreberi</i>)	Shaded dykes and woods; Crichope Linn (s); Dalbeattie Wood (s); Craigs (c); Moffat (c).
130	„ <i>attenuata</i> , Lindb. ...	In similar places; Crichope Linn (s).
131	„ <i>Flærkii</i> , W. & M. ...	N. side of Black Craig, &c., N.G.; Crichope Linn and Terregles (s).
132	„ <i>quinquedentata</i> , Web. (<i>Lyoni</i>).	In similar places; Grey Mare's Tail (n); Dalscairth and Moffat (c).
133	„ <i>lycopodioides</i> , Wallr. ...	Near Hannahstown Bridge, N.G.—very rare.
134	„ <i>exsecta</i> , Schmid...	Bennan Hill and Ballingear Wood, N.G.—rare.
136	„ <i>ventricosa</i> , Dicks. ...	Common; Whitehill (s); Kelton and Lochar Moss (c).
137	„ <i>bicrenata</i> , Lindb. ...	S. of L. Dungeon, &c., N.G.; Lochar Moss (c)—rare.
139	„ <i>incisa</i> , Schrad....	Moss Raploch and Bennan Hill, N.G.; Criffel (c); moors near L. Skene (n).
142	<i>Gymnocolea inflata</i> , Huds. ...	Frequent in damp places on hills and moors, as Barend Moss, Castle-Douglas; Lochar Moss (c).
144	„ <i>turbinata</i> , Rad. ...	Orroland, Rerrick.
149	<i>Sphenolobum minuta</i> , Crantz. ...	Frequent on banks and on the ground on the hills.
151	<i>Nardia emarginata</i> , Ehr. ...	Very common on wet rocks, &c., on the hills (n) (s) (c).
152	„ <i>alpina</i> , Gott. ...	Common on the hills, as on Black Craig, N.G.
153	„ <i>Mülleri</i> , Nees. ...	Hartfell (n)?
158	„ <i>Funckii</i> , Nees. ...	Milyea; N. of Black Craig, Ballingear Woods, N.G.—rare.
160	„ <i>Scalaris</i> , Schrad. ...	Common; Glen, N. of Durrisdcer (s); Lochar Moss (c).

No.	Name.	Locality.
163	<i>Gymnomitrium concinnatum</i> ...	Rocks on Kells hills; Hartfell and Blackhope (n)—rare.
167	„ <i>crenulatum</i> , Gott.	Frequent on rocks on the hills.
170	<i>Fossombromia pusilla</i> , Nees. ...	Fields near N.G.; moist places; common (c).
177	<i>Dilena Lyellii</i> , Hook ...	In one spot in Lochar Moss, near the side of the English road (c).
178	<i>Blasia pusilla</i> , L. ...	Damp roadsides, N.G.; near Carronbridge (s); Cluden Mill (c).
179	„ <i>epiphylla</i> , L. ...	Sides of ditches, &c., common (n) (s) (c).
180	„ <i>calycina</i> , Tayl. ...	Damp roadsides, N.G.; Whitehill; Dalveen hills (s); Beld Craig (n).
181	<i>Aneura pinguis</i> , L. ...	Frequent in wet places; Whitcomb (n); Powder Magazine (c); Knockindock (s).
182	„ <i>palmata</i> , Hedw. ...	Garroch Wood, N.G.—very rare.
184	„ <i>sinuata</i> , Dicks. (pinnatifida)	Bennan Hill, &c., N.G.
185	„ <i>multifida</i> , (Dicks.) Gray.	Bennan Hill, N.G.; Colvend in bogs; Whitcomb (n); pretty common in marshes (c).
186	<i>Metzgeria furcata</i> (L.), Dum. ...	Common on trees and rocks (n) (c) (s).
186b	„ var. <i>acrogenosa</i> , Hook	N.G.—rare.
187	„ <i>pubescens</i> , Schrank. ...	Penton Linns (s).
189	„ <i>conjugata</i> (Dill.) Lindb.	In sub-alpine glens.
191	<i>Authocerus punctatus</i> , L. ...	Embankment at back of New Quay (c).

4th of January, 1889.

Mr J. G. H. STARKE, M.A., in the Chair.

New Member.—Mr James D. M'Veigh.

Donations.—Two numbers of the Transactions of the New York Academy of Sciences and two numbers of the Annals of the same Academy, presented by the Smithsonian Institute; an old document consisting of an "Inventory of household furniture pertaining to the town of Drumfreis left in the manse, to be made furthcomeing by Mr Robert Patoun, minister of the gospell in the said burgh, 1723," presented by Mrs M'Dowall.

COMMUNICATIONS.

I.—*Meteorological Observations, taken during the year 1888.*

By the Rev. WILLIAM ANDSON.

Meteorological Observations taken at Newall Terrace, Dumfries, during the year 1888. Elevation above sea level 60 feet.

Months.	BAROMETER.					Self-Registering Thermom. in shade.				RAINFALL.			HYGRO-METER.		Temperature of Dew-point.		Relative Humidity Saturation=100.
	Highest in Month.	Lowest in Month.	Monthly Range.	Mean of Month.	Inches.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean Temp. of Month.	Deg.	Days on which it Fell.	Heaviest in 24 Hours.	Total Amount.	Mean Dry.	Mean Wet.	Deg.		Deg.
1887.	30.660	28.980	1.680	30.146	53.7	21.7	32	39	36.4	18	0.74	2.89	2.89	38.7	37.6	36.1	89
Jan.	30.660	29.350	1.179	30.053	52.6	13.3	39.3	36.4	7	0.17	0.60	35.4	33.7	30.8	30.8	88	
Feb.	30.529	28.770	1.690	29.601	55	26	29	37.4	17	0.55	2.23	36.5	35	32.8	35	87	
Mar.	30.460	29.336	1.060	29.881	61	27.3	33.7	43.2	13	0.35	1.67	43.1	40.4	36.7	40.4	87	
April	30.302	29.076	1.493	29.966	79	31.7	47.3	50.9	14	0.90	2.78	50.6	50.6	42	42	71	
May	30.569	29.520	0.858	30.032	83.0	36.6	47	55.2	14	0.54	1.74	55	50.7	46.0	46.0	73	
June	30.378	29.270	0.771	29.722	75.8	38	37.8	56.3	24	1.20	6.22	55.2	52.3	49.6	52.3	78	
July	30.641	29.510	0.803	29.935	69.6	37.6	32	56	22	0.56	3.29	50	53	50.2	53	81	
Aug.	30.313	29.704	0.846	30.136	71.8	36.7	35.1	53.2	14	0.30	0.97	51.5	49.3	47.1	49.3	84	
Sept.	30.550	29.180	1.320	29.933	61	25.3	35.7	47	9	0.83	2.80	46.1	44.3	42.3	44.3	87	
Oct.	30.500	28.842	1.234	29.692	55	30.2	24.7	43.8	22	0.94	6.52	43.9	41.8	39.3	41.8	85	
Nov.	30.076	28.947	1.234	29.540	56	22.5	33.5	40.2	21	0.76	4.20	40.3	39.3	38	39.3	92	
Dec.	30.427	28.997	1.520	29.815	53.6	13.3	70.3	40.5	195	1.20	35.91	46	43.6	40.8	43.6	82	
Year	30.600	28.770	1.890	29.915													

Directions of the Wind during the Year.

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Var.
24	41	45	22	32	74	62	44	22

Barometer.—The highest reading of the barometer occurred on 13th January, when it rose to 30.660 inches; the lowest on 28th March, 28.770 in.; annual range, 1.890 in.; and the mean pressure for the whole year (corrected to 32° and sea-level), 29.915 in., as compared with 29.964 in. in 1887 and 29.800 in. in 1886. The months in which the greatest fluctuations occurred were January, March, May, and December. The stormiest month of the year was November, when the reading ranged from 28.842 in. to 30.076 in.; and rain fell on twenty consecutive days, from the 8th

to the 28th, with the exception of one day, the 11th. From the 12th onward to the 24th the Nith was in high flood. He had marked the 16th November as the day on which the severest storm of the year occurred. The months of lowest mean pressure were March, July, and November, when the mean ranged from 29·601 in. in March to 29·722 in. in July.

Hygrometer.—The mean reading of the dry bulb thermometer for the year was 46°; the mean reading of the wet, 43·6°; and the temperature of the dew point, 40·8°; relative humidity, 82 (saturation being equal to a hundred).

Temperature.—The highest temperature of the year was recorded on 26th June, when the maximum reading of the thermometer was 83·6°, as compared with 87° on 25th June, 1887; the lowest, on 12th February, when the minimum reading was 13·3, giving an annual range of 70·3. The month of lowest temperature was February, with a mean of 36·4°; and March stood next, with a mean of 37·4°; while January, which is generally and justly accounted the coldest month of the year, had a mean of 39°. The temperature of January was 1° above average; that of February and March nearly 4° below it. There was frost on 83 nights during the year, with an aggregate of 293°. In 1887 frost occurred on 96 days, with an aggregate of 360 degs. The mean temperature for the year was 46·5°, as compared with 47·2° in 1887 and 46·2° in 1886. The estimated mean annual temperature of the south-west of Scotland is 48°, so that the last three years have been under average. In 1888 there were only fourteen days on which a maximum of 70° and above was reached; and the months in which the sun is strongest, and the greatest heat is usually experienced, were remarkably deficient both in sunshine and warmth. The mean temperature of June was more than two degrees below average, and that of July 4½ degrees. In both months, but particularly in the latter, there was a prevalence of northerly and easterly winds, with cloudy skies and frequent and heavy rainfalls, which greatly retarded the progress of vegetation, and contributed to make the harvest very late. August was scarcely more favourable, the mean temperature having been 2½° below average, and the number of days on which rain fell, 22. But these months were followed by an exceptionally dry, though cold, September and October, which permitted the harvest, though very late, to be gathered in for the most part in good condition. The temperature of November was about 3° above average, and that of December

nearly 2°, so that on the whole we have had during the past year mild and open weather during the winter months, the greater part of February being excepted, with a cold and backward spring in March and April (deficiency of temperature for the two months, 7½°); but as there was almost no frost in May, with a more than average supply of moisture, vegetation made considerable progress in that month, and though the exceptionally cold and wet weather of the succeeding months greatly retarded the ripening process, things were kept green and growing, and with a favourable September and October an abundant harvest was at last gathered in.

Rainfall.—The heaviest fall of rain within 24 hours was recorded on the 22d July, when 1·20 in. was registered. The wettest month of the year was November, with a fall of 6·52 in., more than 2 in. above the average; and July came next with a fall of 6·22 in., more than double the average for the month. In November there were 22 days on which rain fell, 20 of them consecutive; and in July 24 days, the greatest number of any month in the year. Though these were the rainiest months of 1888, there was a great difference in their character. The cause of the excessive rainfall in November was a series of cyclones coming from the Atlantic, with strong southerly, south-westerly, and westerly winds, after the first week, and a temperature much above the average for the season; whereas in July the prevailing winds were more from the east and north, and the temperature greatly below what is usual in that month. The total number of days in which rain or snow fell was 195 (rain, 186, snow, 9—mostly slight falls) as compared with 181 last year. The total rainfall for the year was 35·91 in., as compared with 30·99 in. in 1887 and 41·13 in. in 1886. The average rainfall at Cargen for the last 28 years, as reported by Mr Dudgeon, is 44·67 in. I have observed, however, from Mr Dudgeon's monthly reports that the rainfall at Cargen almost invariably exceeds that at Dumfries, probably from its greater proximity to Criffel, so that the mean annual rainfall here may with probability be estimated at 40 or 41 in. rather than 44 in. This would still leave a deficiency in the past year of 4 to 5 in., though we might naturally have the impression that it has been a peculiarly rainy year. But it is to be observed that, although the rainfall of July and November and in some degree also of December, was much above the average, that of most of the other months was below it, January, February, April, September, and October having been

exceptionally dry—February and September in particular showing a register of less than 1 in. each for the month, February, 0·60 in., September, 0·97 in., or 1·50 in. for the two months, in place of an average of 4 in. for each month, and October a deficiency of 1½ inches.

Thunderstorms.—There were six occasions on which thunder and lightning were observed, the 18th and 19th of May, the 9th and 14th of June, the 26th of July, and the 10th of August. There might have been more, but these were the only instances which attracted my attention. The most severe were those of the 19th May and 14th June, which occasioned considerable loss of life, especially in the south and west of Scotland. The former travelled from the south northwards, and affected more or less the whole country from Cumberland to Aberdeen.

Floods.—I have also noted the occasions on which the river Nith was in flood, viz., from the 4th to the 7th January, the 30th May, the 23d to the 27th July, the 28th October, during a considerable part of the latter half of November, and on the 3d December, the river reaching its highest point on the last-mentioned date.

II. *Some Notes on the Abbey of Holywood and on the Welshes of Colliestoun and Craigenputtock.* By Mr JOHN CARLYLE AITKEN.

Although there are excellent “Lives” of the famous John Welshes, of the family of Collistoun, who figured in the days of John Knox, as well as in the tragic time of the great Whig Persecution at the close of the seventeenth century, and in the reigns of King Charles the Second, and of James, his brother, nevertheless, we may here endeavour to do something in the way of further illustration of some of the more local features, the truly classic vale of Nith seeming to afford a fair field in its still greatly unwritten history. Therefore, should we be fortunate enough, in the course of our notes, to develop any new or characteristic features in the process, our labour may not be altogether in vain.

In the first place, as a featural peculiarity of those mountain and hill regions, amid which lay the ancient homelands of the Welshes, of Dunscore and Nithsdale generally, there is a pronounced and somewhat unusually Celtic association in the surnames of the clans, or communities of folk, who for so many ages lived and

died amid this country of "glens and dargles"—such surnames appearing as if they, in their origin, had belonged to the obscure eras in the unwritten history of that locality, as the ancient hereditary domain of the Earls of Mar prior to the 14th century. Here, accordingly, we may discern, through the medium of the ancient writings, which have survived until our own time, the clear presence of certain individuals, or families of clan-folk, bearing the surnames of the Macraiths, Padzanes, Makfadzanes, Rorysouns, Maccawils, Macmonhaths, otherwise Macmaths (originally a small clan of the island of Cantyre), Makgauchens, Macadams, Jamiesouns, and many others. This country of the Welshes, lying as it did within the ancient "Deanery of Dunfres," *alias* of Nyth, in former ages was, to a very considerable extent, a region of churchlands, monklands, and ecclesiastical baronies, which for unknown centuries had remained in the consecutive hereditary possession of the churchmen and abbots of Melros and of Sacrobosco, or The Haliwod. For example, almost the whole area of the parish of Dunscore consisted almost exclusively of lands belonging to the Abbey of Sacrobosco, or The Haliwod, which were comprehended under the name of the "Barony of Sacrobosco," so-called; the "Monklands of the Monks of Melros," which occupied a whole valley of this parish, towards the Nith and the ancient church of Dunseoir, which was situated on the Nithward confines of the parish, not a great way from the Premonstratensian Priory of Friarscarse, and the Ailisland, or Ellisland, residence of the Bailie of those monklands of Melros, and in our own time of Burns memories and home associations. Both those once great religious houses seem to have owed their original possession of this region of wide-spreading natural forest and orchard country to the liberality of the ancient native thanes, lords, or barons of the vale and "Deanery of the Nyth," as it was.

The Premonstratensian Abbey of Holywood, of which no vestige now remains, as its name seems to imply, was situated amid a plain country of the woodlands, natural oak forests, and sacred groves of the Pagan worship of their predecessors in the land. The Christian Church of Holywood appears to have been a house of religion of a very remotely antique origin, as it figures in various church records in one form or other at a very early date. The oldest name we have seen applied as descriptive of Holywood is contained in the "Scottish Rolls," under anno 1376, as the Gaelic Darowghoquill, the meaning of which we leave to the discretion of

those acquainted with that ancient language. Other more common forms, all conveying in their own fashion one and the same original descriptive meaning, were : Dercongal, Sacrinemoris, Sacrobosco. The Abbey of Holywood and the Priory of Saulseat, in Galloway, as affiliated religious houses of the Premonstratensian order, had claimed as their hereditary commendators the family of the Johnstone of that ilk in Annandale. According to "Hutchison's Cumberland," "John dominus de Kirkconnel founded the Abbey of Holywood in the twelfth century, and William Fitzmichael de Kirkconnel, about the year 1200, made a grant of Kirkconnel in favor of the Abbey of Holmcultran, in Cumberland" (II., 331), and which Abbey, otherwise called of Holme, for several succeeding centuries had held chartered possession of extensive lands in Galloway. In the "Register Book of Holmcultran," besides numerous charters touching those their Galloway possessions, there is item "*Conventio inter Domum de Holme et Dundraynan.*" In the same record we have "Carta Will. filius Mich. de Kyrkconnell," with the period of granting indicated by the mention therein of Lord Gilbert, who was elected Bishop of Galloway in anno 1235, and died in 1253 A.D. "*Carta Huttredi fil Fergus consensu Rollandi ville de Kyrkgunin,*" with indication of the period through mention therein of Walter, Bishop of Galloway, circa 1209-35 A.D. These excerpts we owe to the care of the learned John Goldie, "of Craigmaie," in Galloway, "Commissary of Dumfries," in and towards the close of the last century, the transcript from his notes having been made by Dr Clapperton of Lochmaben. Early in the thirteenth century King Alexander the Second of Scotland had granted "*locum de Dunscoir in valle de Nyth*" to the monastery of Melros. There are many other early grants of lands, &c., of a similar nature to the Abbots of those two once great religious houses, whose baronial lands had originally comprhended nearly the whole of Upper Nithsdale, as we find by the record. Although the Abbey of Holywood, in common with nearly all its kindred houses of the south-west of Scotland, possesses not any history of its own, consecutively written by the fraternity, yet there are still some scattered notices not without interest to be found recorded in the general chronicle of Scottish history. The memory of the Abbey in the "De Sphera" of its once all famous mathematician, "Johannes de Sacrobosco—John of Holywood," still survives in the literature of the land, while, owing to the foresight and pious care of the Lord Maxwell, of the

Reformation era, we may yet discern the effigy and cultured face of this once famous John, as drawn from the sculptured stone, and which, as Antiquary Riddell, of Glenriddell, notes as a sketch, was "A drawing of the head of John de Sacro-Bosco, which Mr Cardonel took for me when he discovered it in the parish church of Terregles in 1788, and which effigy, as having formerly stood in the church of Holywood, the Lord Maxwell had caused to be removed to Terregles Church at the Reformation." We may thus presume that this famous Abbot was buried at his own Abbey of Holywood. Concerning the early history of the Abbey of Holywood, we have such knowledge as is to be gleaned from occasional notices as fragmentary as they are inconsecutive in point of date. The Lord Maxwell, the Warden-hereditary of the West Marshes of Scotland, we find by early chartered evidences, had been the great chief natural Protector and Guardian Bailie of nearly the whole of the splendid Revival structures and great religious houses of the Lords of Galloway and of the south-west of Scotland in general. Not one of the least worthy of note was this Abbey of Holywood, as lying within the territory of the Lord Maxwell. Also figuring as of the ancient Abbots and Commendators of Holywood, we meet with certain Campbells, called "of Lowden and Mauchline;" Crichtons of Librie, of the Lord Crichton of Sanquhar's family; the Lords Maxwell and Nithsdail; Johnstones of that ilk, barons of Annaudale, who would appear to have been among the last possessors of the wider domain lands and church barony of Sacrinemoris, or otherwise the "Barony of Holywood."

Among the few ascertained Abbots of this house we discern a certain fifteenth century "Nicolas Welsh, Lord Abbot of Holywood," who is mentioned, under the year 1480, incidentally in the course of some suit before the Lords at Edinburgh. In the "Taxt Roll of Nithsdale" we find the Baronies of Holywood, of Sanquhar, Glencairne, and of Drumlanrig, each severally taxed at £120 Scots in the year 1554; the "Monklands of Melrose, in Nithsdale," in the same roll, being taxed at £40 Scots. We also incidentally ascertain that the tenants of the Abbey of Holywood, in the ages of the old Border raids and wars, had been accustomed to do a good deal of tough fighting, following their own Lord Abbot and their Guardian, Lord Maxwell, to the field. The baronial lands had been leased out in long tacks, granted by the Lord Abbot, in name of his abbacy, to certain tacksmen, largely of the Maxwell surname, and who you find had oftenest been previously for long

generations in the consecutive hereditary occupation of the same parcels of land, &c., as tenants of the abbey and barony. As the document containing the recital of some of those facts and features is here given for the first time, and is not without its own characteristics, as mayhap even formulated at the dictation of King James the Sixth himself, as it bears traces of his own peculiar enunciation, we may make here some larger extracts.

We may also explain that the Grierson barons called "of Lag" were from, of oldest known time, the hereditary occupants of an old Border castle, and its contiguous barony lands called "of Lag" both, and which even in the fifteenth century are described as "lying in the broken barony amid the Monklands of Nithsdale." The Griers, or Griersons, of Lag, usually styled in the language of the district "The Lairds of Lag," had fought and fallen at Sauchieburn and in "the battle in Northumberland," afterwards known as "Flodden Field," as their charters bear witness. They held their lands direct from the Crown. We accordingly find certain "Royal Lettres granted in favor of Roger Griersoun of Lag, dated at Halirudhouse, the 12th of May, 1585," and in the name and under the authority and subscription of King James the Sixth of Scotland. To all and sundry our lieges of quhatsumever estate, degree, or quality thai be of, and in special to the Baillie of the Abay of Haliwod, &c. Forasmuch as we and the Lordis of Our Secreit Counsaill perfytlie understandin that Roger Griersoun, of the Lag, hes divers friends and kinsmen, tenentis and induellaris upon the threttie sax pound land, callit the Keir, of auld extent, lyand within the barony of Haliwod and Sheriffdom of Drumfries, quhilk in all tymes byegane haif bene onlie subject and haldand to serve and attend upone the saide Roger and his predesessauris Lairdis of Lag, their Chief, alsweil in our weiris and raidis as in their awin particularis affairs, naither were changit, alterit, nor hichit, payand thankfullie the auld accustomit maill and dewtie quhilk thair haif aye dune. Upone the quhilk consideration, and that the quhilkis duellis neare our Bordoures quhair by at all occasions thai behuiffit to ryis and ryid with thair said chief and his predecessouris in thaire and oure predecessouris service. It pleisit our deareste grantschire, King James the Feird [Fourth] of worthie memorie, to direct his lettres and charges to the Abbots and Baillies of the said Abay for the tyme, commanding thaim to desist and ceis fra all vexatione and disobedience of the said Roger and his predecessouris and kinsmen fra making ony

novation or imposition on thaim, nor to haif ony furdre intromis-sioun with thaim than, &c. . . . Quhair we being movit and remembering that there is divers actis and ordinances made be our dearest Moder and maist noble predecessoures in favors of the tenentis of Kirklandis, namelie, sic landis as lies neareoure bordouris, that thaisal nocht be remouabill, hichtit, nor raisit by thair auld dewtie, quhairby thaimay be the mair readdie to obeyoure service as occasion occurred. Therefore commands and charges—accordingly be thiroure Lettres given under our signet, and subscrivit with our hand. At Halirudhous, the 12th day of May, ofoure raigne the augteine year, 1585.”

But we must now take up the subject of the history of the Welshes, as inhabitants of those monklands. Of course the most prominent feature of all his kindred was the “Maister John Welsh of Air,” surnamed “The Incomparable,” and who, before and after his marriage with the heroic daughter of “Maister John Knox,” had such a distinguished career. This John was of the Collistoun kindred of Welshes, and was the second son of the family; David, his eldest brother, succeeding their father, also a John Welsh, in the hereditary lands of Collistoun. Collistoun and Craigenputtock lands, which are associated with the history of the Welshes, lay amid the barony of Sacrinemoris, otherwise the barony of Holywood. Collistoun is known under the more ancient name of Makcollistoun, evidently derived from the clan of those parts known as the Maccawils or the M’Calls, who were also identified as the ancient owners of the lands of Vod, Grennan or Messenger-lands, of Kaidgelaucht or Caitloch, of the same mountain and hill country. Although in the 15th century the family of Welsh had been residents of the county town and ancient royal burgh of Dumfries, certain indications afford some ground of probability that in their own quarter and section of the wide barony of Holywood they must have acted as the hereditary resident deputy-bailies of the Abbots of Holywood long before as well as immediately after the Protestant Reformation, at which time they are clearly identified as holding that trust and office. Not many years after the Reformation of 1560—which on the Borders of Scotland generally, in the nature of things, had at first made slow progress, amid a population the ardent supporters of the waning fortunes of the unfortunate Mary, Queen of Scots, a population so long the tenants of the wide ecclesiastical lands attached to the Church under the Romish Faith in Scotland, with

their then still surviving liferentallers and tacksmen under unexpired leases, &c.—we find the family of Welsh, within the Deanery of Nith, had many important cures and charges. Shortly after the Protestant Reformation we accordingly find, as kinsmen and contemporary churchmen, a “John Velshe, vicar of Drumfries,” a “Schir Herbert Velshe, chaplain there,” both about the presumptive era of the birth of the Reformer, which is given as in the year 1568; a “John Velshe, vicar of Dunscoir;” a Dean Robert Velsch, Vicar of Tynron,” with “Sir Galbert Welch,” his brother, as well as others, all in possession of charges in Dumfriesshire. In the course of the seisin, dated the 21st of May, 1558, which was then granted to John Macbrair, Provost of Dumfries, as son and heir of his deceased father, Roger M'Brair, also *quondam* Provost of Dumfries, among numerous enough other items we find that of an annual rent of 13s 4d Scots money, as exigible by the said Provost from the tenant of the deceased “Thomas Velshe, now in the hands of Schir Herbert Velsche, chaplain, and John Velsch of Collistoun,” and having on the south part thereof the lands of David Cunynghame and on the north those of Ninian Logan, vicar of Cowen. Mention is also made of the bounding lands of Archibald Velsche. By the records it appears that a house called “The Weighouse,” and situated hard upon the “Lochmabengait Port,” or Gate of the Lochmabengait, now the modern English Street of Dumfries, even long before the Reformation had been in the hereditary possession of many John Welshes of Collistoun, who had owned other burgh property. On the 23d of May, 1575, one of those “John Velshes of Colingstone,” belike the father of the Reformer, had sold this familiar mansion called “The Weighouse” to Thomas Maxwell, son and heir of the deceased Gilbert Maxwell, laird of Stroquhan. The house was at this time tenanted by a certain known “David Heris of Dumfries.” This John Welsh we identify as the gentleman who figures in the following entry, as taken from the original document itself, viz. :—

22nd of December, 1573.

“Johannes Velsche de Coloustoun,” acting as Baillie for the Superior of the lands, the venerable Father in God, Thomas, Commendator of Sacrinemoris, grants seisin of the 10/ land of old extent of Skynfurd, in the barony of Sacrinemoris, to Andrew Makkynnay, following upon the Precept granted by the said Commendator to him. There were present, when the above seisin was granted, Cuthbert Velsche, brother of the said John Velsche (that is of Coloustoun, as given above), John Grierson in Skynfurd, George Young, Robert Grierson, Herbert Stett, James Young,

and divers others ; certified and signed by Herbert Cunynghame, Notary Public, Dumfries."

We ascertain for certain that the above John Welsh of Colustoun and Cuthbert Welsh of Stepfurd were respectively the father and the uncle, or father's brother, of the Reformer. In other sections of the extensive churchlands and barony of Holywood there had been various holders or proprietors of more or less extensive portions of land, such as of Bargregane, Redskarris, or Skarr. Cornilie, Stepfurd, all occupied by persons of the surname of Welsh, who may most probably have been originally of the Collistoun family, which, as we may presently find, had in its direct line ended in an heiress about the beginning of the reign of King Charles the Second. A John Welsh of Scarr, who at this time was an elder of the Parish Church of Kirkpatrick-Irongray, was the eldest son of a William Welsh "of Redskarris," or "Skarris," and had been present at Pentland's Battle a few years later. This John Welsh of Scarr must have been among the nearest of kin of the John Welsh, the reputed "last laird of Collistoun," as his daughter, the very young "Hellen Welsh," his heiress, has for her tutors-nominate, under her father's testament, "John Welsh of Skarr and John Welsh of Cornilie." Craigenputtock, as a possession of the family of Welsh, seems to us to belong to their more recent rather than to the earlier eras of the family history. By the testament of John Welsh of Collustonn, 11th November, 1661, it appears that he died without male heirs, leaving, as we have said, the daughter and heiress, Hellen Welsh. This testament mentions also, John Kirks, otherwise Kirkhaught of Bogrie ; the famous Rev. John Welsh, of Irongray, the originator of the open-air convocation familiar as the "Scottish Conventicle ;" and James Welsh, writer in Edinburgh, who are of the attesting witnesses. It is also otherwise mentioned that the Rev. John Welsh, of Irongray, had attended the deathbed of the testator. The following note, taken also from its original, carries on the historical narrative of the Collustoun line :

" Anno 1678.

" John Welsh, in Glenburn, Bailie in that part, for Mary Welsh, spouse of John Gordon, of Kirkconnell, and sister and heiress of her deceased brother-german, John Welsh, Junior of Collistoun, the hereditary proprietor of the lands, under a Charter of Alienation, by the said Mary Welsh, and her said husband, dated the 21st of December, 1669, grants to John Maxwell, of Steelston (her kinsman) seisin of the twenty shilling land of

old extent, of Gibbinstone *alias* Macolvistoun, within the barony of Holywood, dated the 6th of May, 1678."

In the year 1685 there is the service of a Mary Welsh as heir to her father in the 20s land of Collistoun, the merk land of Larg, the 20s land of old extent of Nether Whiteside, and the 40s land of old extent of Craigenputtock. In the local records of the town and county of Dumfries towards the middle and close of the sixteenth century there are numerous fragmentary incidental notices of the actual existence of the family of Collistoun and other Welshes, which owe any interest they possess rather to their historic associations than to any intrinsic merits of their own. At the era of the Reformation the very antique royal burgh of Dumfries, then still the one great "provisioned town" of the marches, its Provost M'Brair, when called to Edinburgh by the authorities, in his evidence characterised the burgh, in its then past history of at least three centuries, as "a town aft brunt and harriet." This statement history fully corroborates, even in such details as have survived. At this period the native inhabitants of Dumfries, as you may discern, had been a vehemently daring race of men, actuated by the old chivalric spirit of the Borderer, with tempers and swords almost equally sharp and shrill, on supposed just occasion, and seemingly altogether without fear in some of their undertakings. The periodical meetings of the "Justices of the Peace of the Shire" seem to have been the known "gala days" for the settlement of old grudges and feuds, wherein they pricked at each other in the true old Border fashion, this popular institution and usage lasting in one form or other until after the period of the Union of 1707. Under such conditions it is the less surprising to find war-gear of all kinds still figuring so largely in the necessary requirements and furniture of existence as it was here as elsewhere in the Marchlands. In the interior of the burgher household you may discern bows and arrows, steilbonnets, lant-staves, guns, "pistolets," swords, long and small, in considerable variety; coats of mail, big and little, known generically as "Jacks;" grey-gowns, "riding-tippats," or hoods, for warmth and protection, while the staigs, or "Galloway Nags," are covered over with certain trappings and war-gear, the rider blowing his own "slogan" upon his "blowing-horn" in tones that if not sweet were terrific and loud enough. Froissart gives an amusing account of the infernal echoes of the hollow and middle of the night as raised in the Scottish camp in repose by such "blowing of horns" as was in

use and wont in the field. In the records there are some peculiar enactments regarding certain horses and nags, which have somehow strayed from the English Border, nobody seems to know exactly how, only their owners seem to have wished to re-acquire possession of them. Here is a curious official item, which seems to point in that direction, the temporary custodian of "Kinmont Liddell, Englishman's twa horse," having been without doubt the father of "Maister John Welsh of Air and Collistoun," the son-in-law of John Knox :

" Apud Drumfries, the 25th of October, 1580.

" Thomas Brattane, John Wrycht, co-burgesses of Drumfries, appointit ordainit, &c. Alexander Cairlell, Protonatar for them in their behalf to defend and pursew in the action and cause, wherein and whereby a fence was laid by John Newall upon twa horse of Kinmont Liddell, Englishman in the hands of Johne Welsche, of Burnfit, and accordingly require an Act to that purpose to be recorded, &c."

The next entry as to " John Welsche " establishes his identity under either of his two landed designations as " of Burnfit," or else as " of Collistoun." He was, of course, the Reformer's father, as John Welsh of Collistoun, the grandfather, would appear to have died not many years after the Reformer's birth.

" Apud Drumfries, 30th Nov., 1580.

" Welche in Colliston.

" John Welche, in Burnfit, Andro Edgar, in Drumfries, and John Jackson, in Killalong, bind and oblige themselves to pay to Edward Irving, callit ' Lang Ritchie's Edward,' the sum of 88 merks Scots monic, &c."

Apud Drumfries, 15th Sepr., 1578.

" Robert Newal, Drumfries, enacts himself and becomes security for Johne Velsche, son of John Velsche, sumtyme of Collistoun, for twentic shillings fenced in the hands of Robert Velsche, burgess of Drumfries, at the instance of Thomas Hayning."

As we said, there are numerous other similar entries in the local records which represent " John Velshe, sumtyme of Collistoun " as an inhabitant of the town, if not during the whole yet for no inconsiderable proportion of the whole year. " Sir John Jamesoun, chaplain at Dumfries," the Reformer's ascertained first tutor or preceptor, we find had probably been the son of a Dunscore proprietor of land, who, about the year 1568, is designed in a local instrument as " Laird John Jamesoun." As this " Schir John Jamesoun " was a chaplain at Dumfries under Johne Velsche, vicar of Dumfries, and was afterwards parish minister of Dunscore,

Wodrow was probably quite correct in stating that the young Reformer had received the rudiments of his education within the town of Dumfries itself, although he has omitted to quote the needful authority, which he probably well knew.

According to the "Fasti," the parish kirk of Dumfries was dedicated to St. Michael, and previous to the Reformation belonged to the Abbey of Kelso. Among the Protestant vicars of Dumfries shortly after the Reformation we find "Maister John Velsche, 1568;" "Maister Ninian Dalzell," who was also head-master of the Grammar School of Dumfries, and "was deposed by the General Assembly in 1579 for having read to his scholars the Roman Catechism." Maister Peter Watson, vicar of Dumfries, originally of Markinch, had also under his charge Terregles, Troqueer, and Newabbey, and was by the General Assembly repeatedly nominated as Commissioner for visiting Annandale and Nithsdale. In 1575 he complained that "the town on Yule last, seeing that neither he nor the reader would read or use doctrine, brought a reader of their own, with tabron and whistle, and caused him read the prayers, which exercise they used all the days of Yule." He was called to account for the informal celebration of the marriage of the "Laird of Garlies," and at the Kirk of Durisdeer, as required, owned his transgression. Maister Thomas Maxwell, vicar perpetual of Dumfries, held previous charges throughout the county of Dumfries. At Morton, in Nithsdale, one of his charges, it is said of him: "He cannot serve at sundry places, maks no residence, but is a Jakman with Drumlanrig." (Reg. Assig.) He died previous to the 23d of May, 1601. From the original in the "Hoddom Collection," prompted by curiosity, we seem to have been the first who had attempted or thought it possible to still decipher the following letter of this "Maister Thomas Maxwell, vicar of Dumfries," and his kinsmen, to Homer Maxwell of Speddoch, an otherwise well-known Commissary of Dumfries. In one part of the letter the reference seems to be to "My Lord," thereby possibly meaning to their chief, John, eighth Lord Maxwell, Earl of Morton, &c., who, as we know, perished at Dryfesands Battle in 1593, or some nine years after the date of this letter. On the 31st of July, 1611, Homer Maxwell, of Speddoche, was declared and served heir to the deceased Mr Homer Maxwell, Commissary of Dumfries, his father (Records). The lairds "of Conhaith" and "of Kelton" were at this period brothers-german, one of whom, Robert Maxwell, was a Notary Public of

Dumfries. The authorship and penmanship of this very rare letter naturally fall to either the vicar of Dumfries or to this Maxwell of Kelton notary. The handwriting is neat, small, and well-formed, although now very indistinct, and looks like the work of some one quite familiar with such undertakings. The whole is contained upon one single quarto sheet of rough letter-paper, and is artistically ornamental in its arrangement and general execution. On the reverse of the quarto sheet is :

“To our maiest assurit and traist Friend the Commissar of Drumfries.

“Rycht assureit and traist freind, eftir our varye hertlie commendatioun ye Maxwell with your wayif with the hail reste of your freinds varaye mekle consydering the greit travell and labor that we haif maid baith at my Lordi’s handis and my Lady’s fir your relief and fauor to be procureit at thaim, quhilk bie my Lady travell and uthir friends, is grantit to you and my Lerd Warrant for you, that comes not to his Lordship. It is thoct bie your hail friends that lykis your weill, that ye owther esteme youre wysdome oure greit and bettir nor thairis can be, or ells that ye esteme not my Lordis favor, quhilk will turn to youre rewine, seing that all friends is content to tak thair part of his lordships burding and nane refusses quhat is thair partit. Thay think it meit ye cum to my Lord, with all possibil deligence, or ells ye will caus uss bie hardlie repressit with my Lord, and he will think that former tallis spoken of you is trew. Thus not doutting, bot witht all possable deligence yee bee at my Lerd this nicht without onie forder delay, or ells say yee not ane uther tyme bot ye ar done for be freinds and advertisit of youre danger gif it eums heireftir. Sua Committis you to God Alnichtig. Off Drumfres this Mondaye the xviii. of Maii 1584.

“Youris assurit Friends to command, Robert Maxwell in Keltoun, Thomas Maxwell, Vicar of Drumfres, and Robert Maxwell in Kirkmah, with the advise of the hail of your freinds and your Wayif.”

We have given these larger notes in order to make clearer the following examples of “Discipline,” which are rather picturesque in their form. Under the Church of the Reformation began the written chronicle of such transactions. The reverence paid to the person of the priest of the Reformation seems to have differed little in degree from the usual custom under all manner of belief throughout the world,

“Apud Drumfries, 10th Jany., 1573.

“The Wrights of Drumfries.

“The directioun of the Wrights of Drumfries by their Conventioun, halding in the Tolbuitht of Drumfries in presence of ane nobil and potent Lorde, Johne Lord Maxwell, ‘Patrick’s sone,’ and Andrew Maxwell, David’s sone.

“Compearit in presence of Maister Niniane Dalzell, Minister and Skulmaister of Drumfries, in the pulpit, the hail of the congregatiōne there present in the paroch kirk for the tyme, and there obedientlie passed down on thair knees and in presence of the hail congregatiōne confessit thair faultit to God, Our Fadir and Lorde the Kingis Majestie, his Majesties Regente, the Provost and Baillies throw thair disobedience devisit againis the forsaidis Conventioun in the moneth of November last bypast, and thair for askit God’s Majesty and the saidis Judges forgiveness, promised never to do siklyke for ever; and thairupon obleissit thaim and ilk ane of thaim undir the hiest pane and charge thair of nicht follow, requiring the same to be set in Act &c. Ita est Herb. Cunynghame, Notary, &c.”

“*Apud Drumfries, 6th of Aug., 1578.*

“*Troublance of the Toune.*

“The quhilk day upon complaint be Maister Peter Watstone, minister of Drumfries, given in be hym againis Robert Welsche: It is fund be the Tryall tane be the Provost, Baillies, and Counsell, that the saide Robert Welsch has dyvers tymes injurit and spokin evill of the said Maister Peter Watstone; and in special on Tyesday last was, at eftir None, spak injurious wordis to the said Maister Peter, in his face and sicklyke, to his wyfe, Dame Courtell, when the said Robert Welsche said: ‘He had leifer see the mekill devill of —(Hades, let us say) nor the said minister.’ Thairfore the saidis Judges and Counsell Ordainis the said Robert to find caution, undir the pane of £40 Scots that he sall not molest, nor trouble the saide Maister Peter, his wyfe and servandis, be injurious wordes or onnie uthir unlauchfulle deidis, in tyme to cum. And to cum on Sunday nextocum to the paroch kirk of Drumfries, in tyme of Preaching before None, and thair maiste Reverentlie upon his knees, befair the pulpit, ask Almichtie God mercie and the saide Maister Peter and his wyfe, the Provost, Baillies, and Counsell and hail congregatiōne thair Forgivnes, and to promyse nevir to do the lyke openlie nor privalie againis the said Maister Peter and his wyfe in tyme to cum, undir the pane of £40 Scots.

“On the other hand the same day, Robert Welsche protestit that the Provost and Baillies wald cause discharge (*i.e.*, prohibit) the said Maister Peter Watstone, his wyfe, and servandis that they come not in his house in tyme to cum. And hereupon requyrit Act, &c.”

From the following entry, taken along with many other similar contemporary notices in authentically vouched and written form, as still surviving, it would appear that the ancestors and certainly the grandparents of the Reformer had resided at Collistoun, and had owned lands in another section of the great barony of Holywood, as on the

“*22d of May, 1545,*

“John Welsh, in Makcollistoun, and Marion Fergusson, his spouse, have seisin of the merkland of old extent of Stronschillat, called the merkland of “The Burnsyde,” lying in the parish of Glencairn, Sheriffdom of Dumfries, &c.”

The charter upon which this seisin follows was granted in their favour by the superior of the lands, Alexander Glencorss, and was dated the 14th of May, 1545. Among many other local witnesses mention is made of a certain "Schir John Dunbar, chaplain"—at Glencairn, as we think—who seems, according to the date and surrounding circumstances, to have been identical with the known and ascertained "Schir John Dunbar, rector of Castlemilk," in Annandale, who is mentioned in the "Latter Will and Testament" of Maister Gavin Dunbar of Mochrum, in Gallo-way, Clerk Register, Preceptor of King James the Fifth, Chancellor of Scotland, and one of the most notable Bishops of Glasgow, where he was entombed in 1547. They two had most probably been of one and the same kindred in common, although the positive degree of relationship appears not here or elsewhere. Another curious entry, belonging to this early period, records that on the "5th of August, 1536, Thomas Welsh, son and aire of David Welsh, called 'David of the Mill,' was made a Freeman burgess of Drumfries." As probably among the first of the Reformation "vicars of Dunscoyr" was a Schir John Welsche, or Velsche, who figures in certain transactions touching the vicarage lands of his charge of Dunscoyr, in concert with John Welsh of Collustoun, on one occasion recording a protest against the alienation of the lands, as they were his for the term of his lifetime. He is also mentioned in the testament of Dean Robert Welsh, vicar of Tynron, in 1568, wherein he figures as one of the executors as well as a legatee to the extent of some £20. Of the degree of positive relationship, if any there were, no mention is made in the testament itself. The testament of John Welsh of Collistoun, the Reformer's father, as reproduced in Young's excellent "Life of Rev. John Welsh," and from the Commissariat records of Edinburgh, is dated "At Collieston, the first day of August, 1600," or, that is to say, some days prior to his decease on the 5th day of the same month of August. By it we learn that Marion Grier, his wife, survived him, that he had a brother-german, Cuthbert Welsh, and sisters, Kait and Isabell Welshes. The said John Welsh and Marion Grier, his spouse, had at the time of his decease issue as follows:

- 1st. David Welsh of Collistoun, his eldest son and successor.
- 2d. John Welsh of Air, the Reformer, his second son, and who married Elizabeth Knox, third daughter of John Knox's second marriage with Dame Margaret Stewart, daughter of Andrew Lord Stewart of Uchiltrie (a very famous marriage in its own day).

3d. Cuthbert Welsh, who succeeded his uncle Cuthbert as heir to certain lands, and had two sons, John, his successor, and Thomas Welsh.

The daughters also surviving were :—Margaret Welsh, who, previous to this year of 1600, had married Hector Maxwell, of Fourmerkland, *alias* Rue Tower, and who appears to have been of the Maxwell family, designed of Steilston and Kilness, in the barony of Holywood; Marion Welsh, unmarried, and residing at Collistoun at the time of her father's decease. It would otherwise appear that the eldest son, David Welsh of Collistoun, had had a daughter, Jean Welsche, who forms the subject of the following unregistered and hitherto unknown contract of marriage. The William Grierson of Kirkbride, the would-be husband, was the son of Robert, the son of Gilbert Grierson of Kirkbride, who again is supposed to have been a son of the Laird of Lag, killed at Flodden in 1513. All had been the hereditary owners of those lands of Kirkbride, which they had held from their chief and superior, the Laird of Lag. This William Grierson, of the contract of marriage, had from Sir William Grierson of Lag a charter of the 40s land of Kirkbride, in the barony of Holywood, dated the 28th of June, 1614. Herbert Cunnyngname of Craighend and Swyre, Notary, Town Clerk, and afterwards Provost of Dumfries, and who had married the daughter of a "John Grier of Swyre," and who draws out the contract of marriage itself all in his own neat small handwriting, may thus very probably have been not unremotely related to the contracting parties of both surnames. This contract not having been recorded in the public register for some reason unknown, by association on the part of the lady, as the niece of the Reformer, the contract may be said to possess a borrowed lustre and interest :

"Copy Contract of Marriage.

"1st November, 1613.

"At Drumfries, the fyrst day of November, the yeir of God MDC. and therteene yeiris (1613), it is contractit and agreeit betuix William Griersoun of Kirkbryid, on that one part, and David Welsche of Collistoun, takkand the burden on him for Jeane Welsche, his lafull dochter, on the uther part, in maner following: That is the said William sall, Godwilliing, compleit and solemnizat the halie band of matrimonie with [each] utheris publiclie as efferis, betuix the dait hereof and the fyrst day of December nextocum, and thairefter indew utheris with bodies and guidis, as becumis mareit personis of Christiane dewtie. For the quhilkis cause of marriage, the said David Welsch of Collistoun, takkand the burden on him for his said dochter, bindis and oblaisses him, his aires, executoris, and assignais to content and pay to the said William Griersoun, in name of tocher with his said dochter,

the sowme of ane thousand merkis monie of Scotland at the Ternis following, to wit sex hundredth merkis thereof betuix and the solemnizatioun of the said mariage, and four hundredth merkis in compleit payment of the said tocher, within twa yeiris nexte hereftir. At the payment of the quhilk four hundredth merkis, it is appointit that the said four hundredth merkis sal be laid wairit and bestowit upon sufficient landis annualrentis and other securities to the weill and utilitie of the saidis William and Jeane spouses futur, and the langest leivar of thaim twa in conjunct fie and the aires lauchfullie to be gotten betuix thaim and their bodeis quhilkis failzeand to the narrest and lauchfull aires and assignais of the said William quhatsumevir. And because the said soume of sex hundredth merkis quhilkis are to be payit betuix and the solemnization of the said mariage are to be warit and bestowit upon the purchasing of ane heretabill tytil of the fortie schilling land of Kirkbryid lyand within the baronie of Haliwod, Sheriffdom of Drumfries : it is appointit that how sone the said William obtenis the heretabill tytill thair of he sall infest and seise dewlie and sufficientlie by sufficient securities and infestment agreabil to the lawis of this realme the said Jeane, his futur spouse, in lyferent during her lyfetye either in fortie poundis monie afoiresaide of annualrent yeirlie to be upliftit furth of the said lands of Kirkbryid at Vitsunday and Martymes in winter be equal portionis. Or ellis in the equal half of the said landis of Kirkbryid with the pertinentis. And heirto the pairties obleissit thaim thair airis, executoris, and assignais severallie to [each] uthers. And for the mair securitie the parties consents that thir presentis be registrat in the buikis of Counsell or the Commissarie Court buikis of Drumfries, and haif the strenth of ane decret with letteris and executionis to be direct hereupon on ane simple charge of ten dayis and for that effect statutis. Thir presentis conjunctlie and severallie firm and stabill. In witness quhair of the pairties hes subscrivit thir presentis as followis, writin be Herbert Cunynghame, notar, tyme and plaice above wryttin, befor thir witness, John Lyndsay of Laggane ; George Maxwell, merchand ; Herbert Cunynghame, younger ; and David Nelsoun.

“I, the said William Griersoun, with my hand at the pen, led by the Notar, underwrittin at my command, because I can not wryte.

“Ita est Herbertus Cunynghame, notarius mandas dicti, Willielmi Greirsoun, &c., &c.”

24th of January, 1889.

At a meeting of the Council held on this date, the Secretary submitted the following letter from the Town Clerk of Dumfries :

TOWN CLERK'S OFFICE, DUMFRIES,
22d January, 1889.

ROBERT BARBOUR, Esq.,
Secretary, Dumfries and Galloway Natural
History and Antiquarian Society.

DEAR SIR,

I enclose excerpt from the will of the late Mr William Baxter, from which you will observe that he has bequeathed certain specimens illustrative of Natural History to the Town Council of Dumfries, with power to the Council to allow said specimens to remain for such time as they see fit in the hands of any Geological or Natural History Society locally connected with the burgh. The matter has been considered by the Provost's Committee, and they are disposed to recommend the Council to place the specimens in the custody of the Dumfries and Galloway Natural History and Antiquarian Society, if the Society will undertake such custody, but, first of all, it is desirable that the articles be inspected, and I am instructed to enquire whether the Council of your Society will depute one of its members to accompany Provost Scott to Glasgow to make the inspection. From a letter from the agents of Mr Baxter's Trustees, I find that it is desirable that the inspection should be made on an early day.

Yours truly,

JOHN GRIERSON, Town Clerk.

The following is the extract from Mr Baxter's Will :

Thirdly, My geological and other specimens illustrative of Natural History shall be made over to the Magistrates and Town Council of the Burgh of Dumfries in trust for the community thereof, and shall be placed or exhibited by the said Magistrates and Town Council in a Public Museum or other suitable premises in the town, conveniently situated and readily accessible to the community, but expressly excepting and excluding the establishment known as the " Old Windmill " in or near Dumfries, with power to the Town Council to allow the said specimens to remain for such time as they see fit (subject to the after-mentioned stipulation in case of a free library being founded) in the hands of any Geological or Natural History Society locally connected with the said burgh, for the purpose of assisting the Society in illustrating Geology or Natural History or promoting the knowledge thereof. To the said Magistrates and Town Council the sum of Fifty Pounds sterling towards founding a Free Library for the said Burgh of Dumfries, in the event of the same not being founded prior to my death, providing also that the specimens and others before referred to and this

pecuniary legacy shall be made over or paid to the Town Council conditionally on their undertaking in such manner as my trustees may consider satisfactory; that the said specimens and others shall be prominently exhibited in said Library, if and when founded; and that such Library shall be conveniently situated in the town of Dumfries, without prejudice to the Town Council allowing said specimens and others to be removed therefrom for short periods from time to time for the before-mentioned purposes of a Geological and Natural History Society, and in the event of said undertaking not being granted as aforesaid, the said specimens and others shall be made over by my trustees to such society, museum, or public institution in the town of Dumfries, as they may deem proper, and the said Fifty Pounds sterling Legacy shall fall into and form part of the residue of my means and estate, to be dealt with accordingly.

The Council requested Mr James Davidson to go to Glasgow and make the necessary inspection.

1st February, 1889.

Major BOWDEN, V.-P., in the Chair.

Donations.—Ten numbers of the Journal of the Linnean Society, presented by Mr Robinson Douglas; the Journal of the Elisha Mitchell Scientific Society, 1888, Part II.; and the Zoological Record for 1887, presented by Mr David Sharp, F.R.S.

COMMUNICATIONS.

I. *Ornithological Notes for 1888.* By Mr WM. HASTINGS.

The most noteworthy of the birds sent to me is Paleas Sand Grouse, which is of very rare occurrence in this country. It is described as being met with in large flocks in some parts of Asia Minor, feeding upon the seeds of a species of an astragalus, a small pea-bearing plant, the seeds of which it seems to be fond of. The birds are well adapted for long and very rapid flight, the wings being long and very sharp-pointed, the first feather in the wing an inch longer than the second, and the feet very small and so much covered with short hairy feathers that the toes are almost hidden from view. There was a variety of different kinds of seeds found in the body of those that were sent to me, the most common being clover seeds and the common wild mustards. Some of them had their crops full of a very small black seed, but I could not say what it was. The birds have sometimes very long flights to take before they reach their feeding ground, and have equally long dis-

tances to travel before they can have a drink of water. About some twenty-five or betwixt that and thirty years ago I had two specimens of the same kind of birds sent me for preservation. If I mistake not, they came from the Moffat district, but they were too far gone and did not make good specimens. I have seen none of them since until this last season, when I received seven nice specimens. They have been met with in various parts of the country, always in flocks of a larger or smaller number. There are several different species of the Sand Grouse, some found in Russia, others in the deserts of Arabia, others in the north of Africa, and also in Spain. The plumage is of a warm, sandy colour, resembling the colour of the desert places that they frequent. I could hear nothing of them having nested and reared their young while here. Another very rare bird in this country is the Ruddy Shiel-drake. I had one sent me last summer, shot in the Solway. It is much of the same size as the common Shieldrake, but very differently marked, being of a bright bay colour all over, and described as being met with to the north of the Baltic breeding in rabbit-holes, in the sand hills, much the same as the common Shieldrake. I can find no account of it ever having been met with in this country. Another little bird, the Spotted Crake, and also the Water Rail, which is equally scarce, I have had specimens of this last season. But although they are scarce they can hardly be called rare. The Great Spotted Woodpecker is another scarce species. I had one, shot last season in the immediate neighbourhood of the town, but it is seldom that it is seen here. I once had a specimen of the Lesser Spotted, shot at Amisfield thirty years ago, and have seen none since. The Great Grey Shrike, or Butcher Bird, was sent me this season from New-Galloway. It was shot feeding upon a hedge sparrow that it had killed. As it cannot hold on with its claws like a hawk, it transfixes its victim on a spike in the hedge, or else in a cleft in the hedge, where it tears it to pieces and makes a meal of it. About the month of August I received a specimen of the Red-eyed or Dusky Grebe, a bird which is not often met with here. It is a very beautiful species, a third larger than the Little Grebe. Some years ago I had one sent me, shot on the Lochmaben Loch. It is by no means common. I have had some curious Hybrid Pheasants sent me this last season, one (a large bird), betwixt the pheasant cock and barndoor fowl. It had quite a pheasant tail, although not quite so long as in the pure breed, and its general appearance shewed at once that it was a pheasant of

large size. I had also a bird bred between the Golden Pheasant Cock and the Common Pheasant Hen, the product being a bird a full third heavier than the pure breed. I have also had this week sent me a very curious Hybrid which I believe to be between the Golden Pheasant Cock and Silver Pheasant Hen. It is somewhat larger than the Golden Pheasant, and is a rich shining black with bright green reflections. It has spurs of a considerable size on each leg, and altogether it is a very curious specimen. In the month of December I had five specimens of the Cross Bill sent me. They appeared to me to be young birds, as they had not the bright colours of the adult bird. They have been known to breed here in various parts of the country. There is nothing that I have seen unusual to note among our native birds generally, but I may mention that the Hooded Crow was more plentiful last season than I ever saw it before. The same remark applies to the Short-eared Owl.

II. *How I Found my Stone Implements.* (Abridged). By Mr
JAMES R. WILSON, of Sanquhar.

The antiquity of the parishes of Sanquhar and Kirkconnel is no matter of conjecture, but on the contrary is strikingly revealed in the history of the northern part of this country. The town of Sanquhar glories in an origin dating back, according to authentic history, to a thousand years ago, and the Camps of South Mains and Saen Caer near the town, the Lacustrine Dwelling on the Town's Common, and the great Territorial Division Dyke which traverses the two parishes, tell of a more remote period still. Besides, the ancient Coal Workings in the parish of Kirkconnel, the Grave of St. Connal on Glenwharrie Farm, after whom the parish is named, the base of a large Runic Cross near the manse, now doing duty as the side of a sheep limbie, the Runic Stone in the Old Churchyard wall, and the Ornamental Stone in a wall on Kirkland Farm—each and all have their own tale of antiquity to tell.

Dr Underwood, who was temporarily resident in Sanquhar, shewed me a small piece of gold and asked what it had formed. Having previously seen in the Liverpool Museum a large number of Gold Lunettes found in Ireland, I at once unearthed the mystery, and by procuring the other piece of the article, found that the whole formed a magnificent Gold Lunette. It is described in the Transactions of the Society of Antiquaries of Scotland by the

late Mr Gilchrist Clark. It was found at Auchentaggart, parish of Sanquhar, by Mr John Wilson, a ploughman there, in 1872-3. After making certain of the genuineness of the metal, I purchased the article at the price of £25 for the late Duke of Buccleuch, and you may now see it in the Antiquarian Museum in Edinburgh, where it is deposited on loan. Visiting Mauchline on business, I saw in the rockery at St. David's this magnificent Ring. During drainage operations on Mossgiel Farm, near Mauchline, in 1883, it was got at a depth of $2\frac{1}{2}$ feet from the surface, and the gentleman from whom I received it procured it from the labourer who unearthed it. Dr Anderson, of Edinburgh, considers it a very fine Charm Ring, and anxiously wished to procure it. He shewed me one as large, but of ruder construction, from the north of Scotland. Those of you acquainted with the history of the poet Burns will remember that Mossgiel was for a number of years his residence. Strange, indeed, that this Charm Ring should have been associated with the land he tilled. It may have been embedded in the soil beneath the "wee, modest, crimson-tipped flower;" and the ploughshare of the simple bard may have frequently disturbed its rest. When Mr Lewis went to pick up the antiquities he had promised me, he had to employ one of his ploughmen to search for them about the farm buildings. On delivering them to his master he remarked, "I ken whaur there's a far bigger stone axe than these." "Where then?" was the query. "On the wa'-head of Ulzieside Barn." I lost no time in visiting Mr M'Call at Ulzieside, and had a fruitless search in the barn. In the granary, however, I found the object I was in search of supporting a slate against a broken window, the stone axe I found measuring 11 inches in length and weighing 7 lbs. Another had at one time been lying about the Farm Offices, but after repeated searches I have been unable to pick it up. On close inspection you will observe this handsome Axe is ornamented with an incised line on the front, and with five such lines on the side. Dr Anderson and other antiquarians who have inspected it consider it one of the finest Stone Axes found in Scotland. The town of Sanquhar was formerly a place of great activity in the weaving trade, but the advent of steam, together with modern machinery, has nearly driven every loom from the place. One remnant of the extensive trade done in weaving in Sanquhar is the prevalence of loom-weights in and about the town. They are generally water-worn stones of a round formation, about two stones in weight, with a perforation in one side for insertion of the steeple or ring

by which they were suspended. Many fine specimens could at present be picked up, but in a short time they will disappear and find their way to the stone magazines and be converted into road metal.

Of Pot Querns I possess a large number. They are to be found on almost every farm in the two parishes. Some are very small and neat, while others are very capacious, and indicate that they may have been used for brewing or even dyeing purposes. I recently saw one in a wood at Langholm, parish of Auchinleck, in use as a dye-pot, and covered with a flat stone above of the same diameter as the pot below. Often you will find them used as pig troughs, and the late Mr Stitt of Ryehill, an experienced valuator, on seeing my collection in my garden, remarked that he had on one occasion valued over six as good as mine to the new tenant of Orchard. He knew their original use well, and informed me of one made of granite, which he had seen when a boy lying at Townhead of Auchenbainzie. I told Mr Hewetson of his remark, and he found the Quern referred to, and removed it for safe keeping to Auchenbainzie. I may mention that I have one which was removed from Queensberry Square, and I heard long after "that Wilson stole old M'Cririck's grandfather's sow trough." This proves the late use of such articles, but there can be no doubt they were originally used for removing the husks from grain or for converting it into meal by aid of a wooden or stone pestle.

III. *A Relic of Burns—Original Miniature Portrait of Clarinda.* By Mr JAMES BARBOUR, Architect.

Another Burns anniversary having just been celebrated, it may be appropriate, while his name is uppermost, to bring under notice a small but most interesting memento closely touching the celebrated correspondence between the poet, as Sylvander, and Mrs M'Lehose of Edinburgh as Clarinda. It is a miniature silhouette portrait of that lady. The history of it is thoroughly authentic. It was one of the articles given by the poet's widow to Mary M'Lachlan, her servant, on the occasion of leaving her situation to be married to Andrew Nicholson. Mr Nicholson, his son, inherited the relic, and his widow is now the possessor of it. The portrait is a black profile bust, delicately executed on ivory. The outline of the ivory plate is a pointed ellipse, one inch and a quarter high, and three-quarter inch in breadth. The picture itself is less than three-quarters of an inch high. It shows a prominent

and characteristic headdress. In Paterson's beautiful edition of Burns two silhouette portraits of Clarinda are given. One of them, which also appears in Gilfillan's edition, represents her at an advanced stage of life. It shows a headdress even more full and of a different texture than our miniature does, but the facial lines of the one resemble those of the other in a marked degree. The other portrait is a fine engraving by Banks, from the original picture in the collection of the late J. T. Gibson Craig. It is larger than the one just described, being two inches and a half high. The face shown differs somewhat as compared with the later portrait, and there are other points of diversity between them. The profile of the miniature partakes of both these portraits, while in other respects, such as the headdress, the form and dressing of the shoulder and breast, and the terminating lines of the bust, there is such close correspondence between it and the Gibson Craig portrait as to suggest that, not only do they represent the same person, but that in respect of date and origin they are closely allied. That they are by the same artist may be assumed—Miers, whom Burns calls a "profile painter," and who, at his request, executed portraits of several other friends. A very interesting question arises as to which of these pictures possesses the highest claim to be considered the portrait of the Clarinda correspondence. Their relative dimensions seem to bear on the point, and in favour of our miniature. Clarinda, before going to the artist, enquired of Burns what size the portrait should be, who replied that it was for a breast pin—a purpose this miniature seems to fit in with exactly, and its history is confirmatory of its having been so applied. In this view it is one of the most expressive relics of Scotland's great bard extant; he wore it next his heart. In Paterson's volume, opposite the Gibson Craig portrait, appear the following sentences from the Clarinda letters—the miniature seems to echo the words:—

Thursday, noon, Feby. 7, 1788.

Clarinda—"I shall go to-morrow forenoon to Miers alone. What size do you want it about? O, Sylvander, if you wish my peace let friendship be the word between us. I tremble at more."

Thursday night, Feb. 7, 1788.

Sylvander—"I thank you for going to Miers. Urge him, for necessity calls, to have it done by the middle of next week—Wednesday the latest day. I want it for a breast pin to wear next my heart. I propose to keep sacred set times to wander in the woods and wilds for meditation on you.

Then, and only then, your lovely image shall be produced to the day, with a reverence akin to devotion."

IV. *Dumfries in the Past.* By Mr PETER GRAY of Camberwell.
(Abridged.)

Whilst engaged in some researches among the books and MSS. in the British Museum I came upon several references to Dumfries, not perhaps very widely known, and I thought that these, with some others occurring in books in my own possession, although in themselves not of very much intrinsic importance, might prove interesting to the members of the Society. They are not of very great antiquity either, the earliest direct notice of the town occurring in one of the Itineraries of John Ray. Ray was perhaps the greatest naturalist between the times of Aristotle and Linnæus, and his Itineraries are records of what were termed in his day "simpling voyages," what are now known as botanical excursions or rambles. Three of these journals were published after his death, and it is from the second of them I am now going to quote. He entered Scotland by way of Berwick in the middle of August, 1661, passed on to Edinburgh, thence to Glasgow, and from Glasgow, through Lanarkshire, to Carlisle. "August, the 24th," he writes, "we rode to Dumfreis, or, as they spelled it, Drumfresc. . . . At Dumfreis they have two ministers—one a young man named Campbell, related, as we are told, to the M. of Argyle; the other an elder man, by name Henderson, who has married his daughter to the younger. Campbell prayed for the preservation of their Church government and discipline, and spoke openly against prelacy and its adjuncts and consequences. Here, as also at Dunbar and other places, we observed the manner of their burials, which is this: When any one dies, the sexton, or bellman, goeth about the streets with a small bell in his hand, which he tinkleth all along as he goeth, and now and then he makes a stand and proclaims who is dead, and invites the people to come to the funeral at such an hour. The people and minister many times accompany the corpse to the grave at the time appointed, with the bell before them, where there is nothing said, but only the corpse laid in. The minister there, in the public worship, does not shift places out of the desk into the pulpit, as in England, but at his first coming in ascends the pulpit. They commonly begin their worship with a psalm before the minister comes in, who, after the psalm is finished, prayeth, and then reads

and expounds in some places, in some not ; then another psalm is sung, and after that their minister prays again, and preacheth as in England. Before sermon, commonly, the officers of the town stand at the churchyard gate, with a join'd stool and a dish, to gather the alms of all who come to church. The people here frequent their churches much better than in England, and have their ministers in more esteem and veneration. They seem to perform their devotions with much alacrity. There are few or no sectaries or opinionists among them ; they are much addicted to their Church government, excepting the gentry, who love liberty and do not care to be so strictly tied down." The present practice of inviting to funerals by advertisement is thus practically a reversion to an old custom, which Ray found also at Nantwich, in Cheshire, and which was probably common throughout the North. There are no plant localities given, but a catalogue is referred to in a note, and I have observed Dumfriesshire habitats in the "Synopsis." Perhaps it might be well to keep this in mind against the next edition of the Flora.

The author of a "Tour through the Whole Island of Great Britain," written in the first half of the last century, says of the burgh : "Dumfries was always a good town, with large streets, and full of reputable and wealthy merchants, who trade into foreign parts and employ a considerable number of ships, especially since they have embarked in trade to England and the English plantations. This town is also advantageously situated for an increase of commerce on the river Nid, or Nith, for, though it stands near two leagues from the sea, yet the tide flows up to the town, and ships of burden come close up to the quay ; and about four miles below it the largest merchant ships in Britain may ride in safely. . . . They had formerly a woollen manufacture here, but the Union has in a great measure suppressed these things in Scotland, the English supplying them better and cheaper ; yet, at the same time, the Scots have more than an equivalent by an open trade to England and all the English plantations. The castle in this town is very old, yet is still pretty good and strong."

In Chamberlayne's "Magnæ Britanniae Notitia" for 1718 the state of agriculture and horticulture in Scotland at the time is spoken highly of, and the country is described as abounding with the best timber trees. Regarding Dumfries it is said : "The streets are large, and the church and castle very stately."

My next author is Dr Richard Pococke, Bishop of Ossory, a man of some note in his day. There are two manuscript journals of his travels in Scotland in the library of the British Museum. They have, I understand, been lately printed, in whole or in part, by an Edinburgh Society; but the work is not in the Museum—at least I was unable to find it—and have taken my excerpts from the MSS. These journals are in the form of letters to his mother, addressed “Honoured Madam.” The first of the journeys recorded in them was taken from Dublin to England, and the Bishop on that occasion arrived about the middle of July, 1750, in Dumfries, which he describes as “pleasantly situated on the river Nith, which winds so as to make a peninsula of the town and the fields to the north of it.” I possess a copy of an etching by Scott, of Eldin, the view being taken from a spot on the Maxwelltown side a little above the old Foundry. It shows a scroggy down from the river to the New Church; and a couple of men with guns and a dog are beating the meadow on the Galloway side for game, while a pack-horse and its driver are proceeding along the Lincluden road, indicating the state of the Galloway thoroughfares at the time. On the Dumfries side there is a steep brae to the river just as I remember it before the wall was built there. “The principal street,” Dr Pococke proceeds, “is broad and well built of the red freestone in which the country abounds. There are two churches in the town, one of which, if I do not mistake, is for an Episcopal congregation. They have a large building here called the Newwork, which, as well as I could be informed, served formerly as a warehouse. There are some little remains of an old friary in the town, famous in history for being the place where Cummins (who was suspected by Robert Bruce, King of Scotland, to have been treacherous towards him in his conduct with the English) took refuge, and was murdered by the King’s command, on which the King was excommunicated by the Pope and the chapel for ever interdicted in which the murder was committed; on which St. Michael’s, at the east end of the town, was built for the friary, which has a handsome steeple to it. There is a fine bridge here over the Nith into Galloway. This bridge and a waterfall, made by art to keep up the river for some uses, make a very beautiful prospect from the side of the river. Boats come up to the town, and ships of forty tons within two miles of it, and they have a great trade in tobacco. This town maintained its loyalty in the last rebellion, and severe contributions being raised on them ’twas

made up to them by the Government. . . . Over the river near the town is a small mount, which would not hold at the top above thirty people. It is called The Moat, and it is supposed that the heads of the place held their meetings here and promulged their laws to the people. There is a very fine prospect from it of the country round. I saw from it Lincluden, an old numery, and near it is a monastery called Holy Rhoad (qy., Holywood), and at some distance from Dumfries what is called New Abby, and in the records *Abbatia dulci cordis*. (Johannes de Sacrobosco, an eminent mathematician of the thirteenth century, whose treatise, 'De Sphæra Mundi,' continued to be used in the schools for nearly four hundred years, is believed to have been originally a professed brother of the Convent of Holywood.) Not far from Dumfries is a chapel called Christo, where St. Christopher Setin is buried, who was beheaded (though a Scotchman and no subject) by Edward the First." It will be observed that the Bishop's history is not of the most accurate character, but the notices in his next journey are nearer to what is generally received.

Dr Poccocke's next recorded journey ten years afterwards was a more extended one, and included the Orkneys and Western Islands. It is described in three large folio volumes in MS. In the beginning of May, 1760, he arrived in Dumfries from Portpatrick. "I came from Newabbey," he writes, "six miles near the Nith, the old Noiras or Nidius, having a bog to the right and pleasant hills to the left, to Dumfries, in Nithesdale, where I was in 1747 (?). This town carried on a great tobacco trade until the Tobacco Act passed, which destroyed that commerce, and the people being grown rich, and their money not employed in trade, they have lately adorned the town with beautiful buildings of the red hewn freestone, and the streets are most exceedingly well paved (!). They have a handsome town-house, and all is kept very clean; so that it is one of the handsomest towns in Great Britain (and Poccocke had travelled over the most of it), and very pleasantly situated on the Nith, over which there is a large bridge; and as the Assizes are held here for all the south part of Scotland, the town is much frequented by lawyers. The shipping lie under Srefel (sic), eight miles below Dumfries, and come up three miles higher to unload at Glenteyrel (Glencaple ?) Here was a friary of Conventuals, founded by the same Devorgilla (referring to a previous account of Sweetheart Abbey), in which John Duns Scotus took upon him the habit, who died in 1308 at Cologne. In

the Church Robert Bruce, Earl of Carrick, killed Red Robert [John] Cuming before the high altar in 1305 ; and James Lindsey and Roger Kilpatrick murdered Sir Robert Cuming in the sacristy, and were excommunicated by John XX. in Avignon."

Thomas Pennant, the distinguished naturalist, made his second tour in Scotland in the summer of 1772. Entering Dumfries from the south "beyond Port Kepel," by which I suppose he means Glencaple, he says: "The country on both sides of the river is very beautiful, the banks decorated with numerous groves and villas, richly cultivated and enclosed." Dumfries itself he describes as "a very well built town, containing about 5000 souls. . . . It was once possessed of a large share of the tobacco trade, but at present has scarcely any commerce. The great weekly markets for black cattle are of much advantage to the place, and vast droves from Galloway and the shire of Ayr pass through on the way to the fairs in Norfolk and Suffolk." The two churches are described as "remarkably neat." The author then proceeds: "Had a beautiful view of an artificial waterfall just in front of a bridge originally built by Devorgilla. It consists of nine arches." Pennant's brief notice of the town concludes with the mention of "a fine circumambient prospect of the charming windings of the Nith towards the sea, the town of Dumfries, Terregles, a house of the Maxwells, and a rich vale towards the north" (probably from the Corbelly Hill).

Robert Heron, described as a miscellaneous writer—I suppose what used to be known as a bookseller's hack—made a journey through the western counties of Scotland in the autumn of 1792, the second year of Burns's residence in Dumfries. He describes the environs of the town as being in a high state of cultivation, with gentlemen's seats scattered around it as around Edinburgh and Glasgow. Since the beginning of that century, he says, it had risen from a state of considerable depression to considerable wealth and population, corresponding to the improvement of the surrounding country. The greater part of the High Street and of the older parts of the town would then be much as they are now, barring the ornate shop-fronts and the plate glass ; but the great towns not having yet risen to opulence, the streets would look handsome, as he describes them, by comparison. He praises the beautiful and advantageous situation of the town, says the streets are well lighted, but, unlike Dr Pocke thirty years before, thinks

that the pavements "might be improved"—a suggestion seasonable for many years afterwards. The schools of Dumfries, he tells us, had been long eminent, and that many very able scholars had received their initiatory classical education there, there having been a succession of three of the ablest teachers of the Latin language known for some time in Scotland, namely, Mr Trotter, Dr Chapman, and Mr Waite, the then rector. Heron's estimate of the townsmen, and his description of the Saturnalia going on on the occasion of his visit, are so fully quoted in Mr M'Dowall's excellent History that it is unnecessary to repeat them here. His description of the race-week is doubtless exaggerated; at the same time, making every allowance for that, one cannot but perceive how dangerous a place Dumfries must have been for a man of Burns's temperament. The author of the curious and interesting "Autobiography of a Beggar Boy" (James Burn) begins his memoir with the remark that where or how he came into the world he had no very distinct idea (not, by the way, a very uncommon experience), but that the first place he found himself in was a garret in the High Street of Dumfries about the year 1806. Burn did not remain long in Dumfries; but forty years later in his chequered career he travelled from Newton-Stewart to the town. He found great changes everywhere, mostly for the better. "I found," he says, "villages where formerly there was not the vestige of a house, and in other places ruins where I had formerly seen cheerful dwellings. I could see no greater change in that part of the country than what was observable in the condition of the soil; everywhere the hand of industry was abundantly visible in the improved state of the land. In one place hundreds of acres of moorlands were reclaimed, and in another what had been a deep bog was drained and bearing a rich harvest of grain."

"G. W., Haddington," is the *nom de plume* of a Rev. D. Laing, probably a Dissenting minister of some sort, who travelled through the southern and western counties of Scotland in 1817, and published a journal of his tour in a thin duodecimo. Mr Laing arrived in Dumfries on the last day of May in the year above mentioned, and, like Heron, found the town *en fête* on this occasion owing to the shooting for the Silver Gun. He was wakened the next morning in a fright by the banging of the Midsteeple bells, summoning the Trades to their muster on the Sands. On the

origin of this Wappinshaw he enters into a lengthened disquisition upon the authority of a "public and respected character in the town of Dumfries," who informed him that "in the reign of King James the Sixth, and on some of his excursions in that part of the country, being in danger, the news reached the town of Dumfries. Accordingly the Seven Incorporated Trades of that town went to the assistance of his Majesty. This fresh supply of troops arriving in time was the means of rescuing him from the danger he was exposed to ; and so sensible was the King of this timely interference of his Dumfries subjects, to show his gratitude the more, and wishing to improve [them] in the use of arms, he complimented them with a silver tube something like a pistol barrel, now called a silver gun, with a charge to set apart a day annually to shoot for the said gun." The writer then describes the march off to the Kingholm of the Trades, drums beating, colours flying, and a merry peal resounding from the famous Steeple. About six in the evening news arrived from what Mr Laing calls "the field of blood," to the effect that two young men had been accidentally wounded, one of them mortally, which prompted the following effusion of the author's muse :

" Ah ! thoughtless mortals think on this,
 Your folly and your shame ;
 O, turn your eyes and view the case,
 And sorrow for the same.

Your precious time thus spent in vain,
 How can the thought you shun,
 That something's lost—now, where's the gain
 Got by your silver gun ?

Is something lost ? Yea, sure there is,
 More precious than the sun,
 Your brother's blood is shed, and cries,
 Discharge the silver gun."

On the following (Sunday) morning he heard a sermon by Mr D. (probably Mr John Dunn, the Independent minister of that time), and in the afternoon a "close and practical discourse" from the Rev. Walter Dunlop, who seemed to him to be "a serious man." Mr Laing describes the religious state of the town as not so favourable, "according to his information," as could be wished ; but adds that a few years previously "a worthy character," he (Mr L.) trusts "with the same feeling spirit as the Apostle when he

beheld the city of Ephesus wholly given up to idolatry, in like manner seemed to feel for the inhabitants of this town." What the worthy character did was to open schools for poor children and illiterate adults, which was the best and the only thing to do, for besides the two Established Churches, as Mr L. tells us, there were seven other places of worship in the town, which had then a population of about 7000. Dumfries is described by the author as "delightfully situated on the river Nith, exceedingly well built, although possessing very few remarkable or magnificent public buildings, and not only the county town, but also the most flourishing place in the south of Scotland." The houses he considers "in general handsome," and possessing "a light and an agreeable appearance." At the time of his visit "things were very dear, the quatern loaf one shilling and fivepence, the meal four shillings and sixpence a stone, and, what was still worse, oatmeal and potatoes could not be got."

Several of the novelists notice Dumfries. The complimentary references to the town and its inhabitants in Scott's pages are familiar to us all. In "Humphrey Clinker" Matthew Bramble is made by Smollett to express himself in high terms regarding the beauty and prosperity of the town; and his nephew, young Melford, describes it as "a very elegant trading town, with plenty of good provision and excellent wine at very reasonable prices, and the accommodation as good in all respects as in any part of South Britain." He adds: "If I was confined to Scotland for life, I would choose Dumfries as the place of my residence." "Humphrey Clinker" was written in 1770.

As for the poets, Burns is not the only one by many who has sung the praises of Nithsdale. In a poem of Keats' there is a remarkably comprehensive picture of the town and its site in a few words, communicating even an impression of the soft, "sleepy hollow" character of its summer climate.

"The town, the churchyard, and the setting sun,
The clouds, the trees, the rounded hills all seem—
Though beautiful—cold, strange as in a dream
I dreamed long ago, now new begun."

I conclude this rambling paper with a couplet of John Home's in the sentiment of which you will all concur:—

"Flourish Dumfries, may heaven increase thy store
Till Criffel sink and Nith shall flow no more."

BAXTER BEQUEST.

The following letter was sent by the Honorary Secretary to the Town Clerk in answer to his letter, dated 22nd Jan., 1889:—

DUMFRIES, 6th February, 1889.

JOHN GRIERSON, Esq., Town Clerk.

DEAR SIR,

Referring to your letter of date 22nd January last, a meeting of Council of this Society was held last night, when Mr Davidson submitted a report on the cases of specimens bequeathed to the town of Dumfries by the late Mr William Baxter, which I herewith enclose. After hearing the report the meeting unanimously adopted the following resolution:—“That the Society agree to accept custody of the Baxter specimens on the conditions following: That the Town Council provide suitable cases in which to place and exhibit the specimens, and otherwise do what is necessary to relieve the Society of any expense connected with their reception and custody. That the Society shall have power to weed the collection of worthless material. That the Society, while exercising the same care as they do with their own property, shall not be further responsible for the specimens. That the arrangement shall be terminable by either party on three months’ notice.”

I am,

Yours faithfully,

ROBERT BARBOUR, Hon. Secy.

1st of March, 1889.

Mr JAMES BARBOUR, Architect, in the Chair.

COMMUNICATION.

The Practical Outcome of Fish Culture. By Mr J. J. ARMISTEAD of the Solway Fishery.

Mr Armistead mentioned that fish culture was known to the ancients, but it seemed to have been entirely forgotten, and was re-discovered about a century ago in France by two peasants, and about the same time in Germany. The discoveries at first were regarded as of purely scientific interest, and no practical value was attached to them until within quite recent years. Although a beginning was made in France and Germany, really little was done until the Americans took up the matter in real good earnest, as they usually did with anything they took in hand. They were now competing with us in ova, as they did in almost everything

else. Only the other day he received a consignment of very healthy salmon ova from America. In Canada the salmon rivers had been taken in hand, and in some of them reception houses had been built which the salmon entered, being prevented by an artificial obstruction from going further up the river, and having attendants to wait upon them. In some instances they were actually kept for some time in the fresh water and then sent back to the sea. This alone, he need not say, would tend to keep them out of the hands of the poachers. In the management of our salmon rivers, he was sorry to say, we were much behind the Americans. What with pollutions of various sorts and absolute neglect in many cases, they seemed to be going to destruction. Fish culture had at first to encounter a good deal of opposition, partly arising from our ignorance of the subject. This was the cause of its being often carried on in a rather blind manner, not sufficient care being taken with the development of the embryos, &c. While people were successful in producing fish, in many cases these would not live to grow up. However, within the last ten years they had made great strides in their practical knowledge, and this difficulty had been entirely overcome. Having referred to the hatchery on the Tay, first at Stormontfield, now at Duplin Castle, and to the great encouragement given to fish culture by the American Government—which has provided an aquarium car for transference of fish from one part of the country to another, and allows trains by which it travels to be stopped at streams for watering and other purposes—the lecturer quoted from a letter by the late Professor Baird, inspector of fisheries in that country, to this effect: “In the Sacramento River we are absolutely certain of our ground, having brought up the supply of salmon to more than its pristine condition of abundance by planting about two millions of young fish every year. The catch has increased in five years from five million pounds to fifteen millions; and in 1881 there was more fish than could be utilised in all the canning establishments on the river.” With reference to the quantity mentioned, Mr Armistead observed that it was no use attempting to deal with a salmon river unless the thing was done on a large scale. Similar results had been attained on many other rivers both in the United States and Canada. As an example of the practical value of fish culture in our own country, he exhibited a diagram showing the results obtained from stocking Loch Leven with trout fry. 9000 fry were turned into the loch in 1875—a very small number for such a

sheet of water. Next year 22,000 were turned in; in 1877—70,000; in 1878—45,000. Then a disagreement arose, and the hatching was given up for three years. In 1882, 50,000 fry were turned in. Next year, again, nothing was done. What were the results? Before 1875 the yields were gradually getting less. Loch Leven was a favourite resort of anglers, and heavily fished; and the fishing had been getting worse and worse year by year until 1875, when the catch fell to 5093 in number, and in weight to 5668 lbs.; so that the fish averaged a little over a pound. In 1876 only 3086 were reported to be taken, and the weight was 3370 lbs. In 1877 the catch jumped up to 6092, but the weight was only 5385 lbs., being an average of less than a pound. Of course allowance must be made for atmospheric influences; and it might be that 1876 was an unfavourable year; but the catch of 1877 was a good deal larger even than that of 1875. The fry of 1875 had not had time to grow to any size. They would not average, probably, more than a quarter of a pound; and it was probably a number of these which swelled the take, but reduced the average weight. In 1878 the catch was doubled, being 13,319; and again the weight was less in proportion, being only 8919 lbs. In 1879, 21,045 fish were taken, and the weight was 16,192 lbs. Four times as many fish were taken from the loch than was the case before the stocking began. In 1880 the number taken was 19,405; weight, 18,552 lbs. In 1881 there was a marked falling off—from 19,000 to 16,000; and the next year only 9000 were taken. That was the result of giving up fish culture. In 1882 a spurt was made, and 50,000 fry were turned in. This addition could not tell on the year 1883; but they had that year a great jump, from 9000 to 14,000. This was accounted for by the fact that the conservators of the loch, finding they had neglected their business, tried to atone for the error by turning in 3000 two-year-old fish. The average weight that year again approached a pound—12,742 lbs. for 16,062 fish. This table shewed clearly the benefit accruing from fish culture when properly carried on, and how a fishery suffered from neglect of it. In our salmon rivers, where fishing was carried on year by year, by methods which were being continually improved and rendered more destructive, the stock of fish must be constantly diminished, unless fish culture were resorted to or we had a very much longer close time. Another benefit which arose from the cultivation of trout was that we could grow or produce very much larger fish than were produced naturally.

The fish in Loch Leven, they saw from that table, seemed to average about a pound, and he was assured by anglers that from a pound to a pound and a half was considered good weight. In Loch Kindar—to take a local example—we had fish weighing from three-quarters to one pound pretty freely taken. They sometimes reached $1\frac{1}{2}$ lbs. or 2 lbs. ; but if a 2 lb. fish were taken from that lake, he thought it would be pretty well talked about in Newabbey. He had heard of one five pounds weight being taken. But we could take fish and by artificial cultivation grow them up to 4 lbs. or 5 lbs. quite easily. Fish taken from Loch Leven had been grown up to 9 lbs. without any difficulty. Several years ago he turned into a Lancashire reservoir some Loch Leven trout fry, which attained a weight of from 3 lbs. to 4 lbs. in three years' time, or really in two and a half. As to the identity of the fish there could be no doubt. He made inquiry as to the food which they had been getting, and he found the reservoir was completely choked with little shell fish. Some of the trout, on being dissected, were found to be gorged with them. Again, he had another case in the Dalbeattie reservoir. Some fish which were turned in there were taken two years after $1\frac{3}{4}$ lb. and up to 2 lbs. weight, which was a rate of growth far beyond the natural growth of trout. He had for years maintained that fish, like cattle and poultry, could be materially improved by careful selection and judicious breeding ; and he was convinced that in course of time we should see remarkable results in this direction. In the case of animals and birds we had certain races of monstrosities developed. The fantail pigeon, for example, was really a monstrosity or deformity. So it was with the other fancy pigeons, all of which had been produced from the wild rock dove which frequents our rocks and caverns. With fish similar results were being produced. A particular kind of fish was just now being sold in London, he believed, at a guinea each. They were really little gold carps. You bought them in little glass globes at these enormous prices, simply because they were deformed, and had curious double tails, which were arched over. They might call them fan-tail fish. The name of telescope fish had been given to them—he did not know why. It was found that these fish had formed a race of their own, their young inheriting the double tail, hunchback, and deformities of the various fins. In the case of the char of Windermere (the *Salmo Alpinus*) we had a very striking result. The lecturer exhibited a very fine cast of one, coloured after nature, which had

been reared by himself, and which weighed 2 lbs. He had seen some thousands or tens of thousands of char taken from that lake, and never yet saw one which would turn the scale at half-a-pound. The common size, he thought, was five to the pound. Although he had heard of much larger fish being taken, they were very rare. These fish could be taken from Windermere, and in a few generations grown to the size of the one exhibited. He had grown them up even to 3 lbs.

Mr Armistead next alluded to the despatch of salmon ova to the Antipodes from this country by Mr Frank Buckland and Mr Youl, and also from America, and to the large proportion of loss caused by the hatching of the eggs during the voyage. It had since been discovered that by subjecting them to a low temperature hatching could be so retarded that they could be kept for a long time. He had himself adopted this process successfully in the case of ova taken from the Nith and exhibited at the Fisheries Exhibition in London. He next spoke of the improved results obtained by hatching the ova on glass grilles, which prevented contact with any deleterious substance, and expressed his preference for either glass or slate over metal, even when varnished.

Passing on to speak of the American trout, Mr Armistead said this fish was really a char. They had been introduced into this country for about twenty years. He got a considerable supply of ova, and the fish had passed through a great many generations, and been considerably improved in that time. He exhibited a few recently hatched fry, some of the ova, and a bottle containing two little double-headed fry and several others deformed in various ways. Peculiar forms, he explained, could be produced by pressure applied to the ova. The two-headed ones were the produce of what might be called double-yoked eggs. The American trout had been a good deal run down by some people; and one reason for that, he believed, was that wherever he had been put into rivers or lochs from which he could escape, he had done so and gone away to sea. There they attained to a considerable weight. Instances were recorded of them being taken of eight, ten, and even twelve pounds. The very fact that the fish would leave fresh water and go to sea was one strong proof of its value. One reason why we had been unsuccessful in stocking the large rivers with it was that we had not put in sufficient. In America it was quite a common thing to turn ten or twelve millions into a river in a season. Here, he believed, the largest known stock

ever put into a river had been about five thousand, which would be really nothing, put into the Nith or the Tweed. So we had never really tried the fish in rivers. But in ponds and lakes where he could be confined he had done remarkably well, and was really a great acquisition to our waters. He was lately at a place where a number of these fish had been turned in, and found them spawning in the race waters at the head of the pond. They had grown to a weight of 2 lbs. or 3 lbs., and were providing not only excellent sport but occasionally pleasant change of diet to the proprietor. He had also Loch Leven trout, which he could take at any time. To have fish thus at command was a very desirable thing, and he knew none which would thrive better in small space than the American trout. He had reared them in small tanks up to a weight of 4 lbs. or 5 lbs. He found that they bore a higher temperature than our trout; and they had also been acclimatised to greater extremities of temperature.

He believed the time would come, before very long, when every country house almost would have its fish pond, and the proprietor would be able to send out and have a few fish taken from it, just as he sent now to his poultry-yard and had fowls or ducks killed for dinner. For years all the energies of fish culturists had been devoted to the culture of trout and char, with an occasional attempt at the culture of salmon and sea trout, which had been greatly retarded by the withholding of proper facilities. But now the cultivation of coarse fish was being gone into a good deal. One advantage of this would be that this class of fish lived upon a vegetable diet much more than the salmonidæ. These warm water fish, or fish like the carp, tench, and others, did very well indeed, under cultivation. Some objections had been taken to their flavour, and objections which, he believed, had a good deal of weight; but these were entirely got over by simply transferring the fish before they were eaten to stews or tanks supplied with pure water. Keeping the fish there and feeding them for some time, they entirely lost the flavour of weeds and mud, and came out perfectly eatable. This was very much more widely known on the continent than here. If it were more widely known in this country, we might utilise many fish which at present people absolutely refused to eat. Mr Armistead next explained a method which he followed of rearing little shell fish, crustaceans, and tadpoles, to supply food for the fish in the ponds, which was done in a semi-natural way over sluices from ponds at a higher level. Fish

culturists had also their maggot factories; and the ordinary earth worms could be gathered in the bushel by sending little boys to follow the plough. He further pointed out the necessity, in constructing a pond, of providing for the food supply of the fish by introducing aquatic vegetation. There were thousands of acres of barren water in this country—lochs and moorland pieces of water, which contained only fish so small that they were not worth taking out. Many streams likewise contained no fish worth catching. These waters could be cultivated to a very considerable extent. A good many reasons had been adduced for the small size of the fish. One was that they were far too numerous. He had heard people recommend the putting of pike into the water to keep them down. That was the very worst thing that could be done. The presence of pike was one of the great difficulties in the way of successfully stocking some of the lochs in Kirkcudbright, of which there were so many. He did not believe that the trout were too numerous in any of these mountain sheets of water. He had seen fish do better when crowded in tanks than when dispersed more thinly. He had reared two hundred or more large fish in a pond 60 feet long and only 4 feet wide and 3 feet deep. It was not that the fish were too numerous; but it was probably a want of food in these lakes. That want could easily be supplied. Aquatic vegetation could be introduced if it was deficient, as it often was in mountain streams, and shell fish or crustaceans could be put in—the fresh water shrimp, for example. The snails were perfectly harmless to trout in all stages. The shrimps, unfortunately, preyed on the ova when they could get to it; but he did not think they could do a serious amount of damage when the ova was naturally deposited by the fish, for the eggs were then buried deep in the gravel. Another reason which probably accounted to a great extent for the small size of the fish in many waters was the want of change of blood. He believed greatly in transferring fish from one water to another—introducing, of course, as far as possible, really good fish. Many of our streams which are not large enough to contain good fish could be best utilised by making a succession of dams, which could be stocked really to any amount. A stream which did not contain any trout worth mentioning could in this way be made to produce simply tons of fish.

5th of April, 1889.

At a meeting of the Council, at which Major Bowden, V.-P., presided, the Secretary intimated that he had received a communication through Mr James M'Gill, from Mr B. Clark, one of the late Mr Baxter's Trustees, proposing on the part of the Trustees that a collection of coins, which belonged to Mr Baxter, should be placed in the custody of the Society (for the Town Council) along with the other specimens. The Council agreed to accept these coins together with crayon portraits of Mr Baxter and his sister, and instructed the Secretary to convey the thanks of the Society to Mr Clark.

5th of April, 1889.

Major BOWDEN, V.-P., in the Chair.

New Member.—Mr Joseph Wilson, late Hon. Secretary, on the recommendation of the Council, was elected an honorary member of the Society.

Donations.—Transactions of the Society of Antiquaries of Scotland for 1887-88, and Reports on Local Museums in Scotland, presented by Mr G. F. Black; the 22nd Report of the Peabody Museum and an Index to their Reports; the Essex Naturalist for November and December, 1888; and two squirrels (local), presented by Mr Joseph Wilson; and also two tokens of Sanquhar, presented by Dr A. Davidson.

COMMUNICATIONS.

- I. *Words in the Dialect of Dumfriesshire, found in Chaucer, Spenser, and Shakespeare.* By Mr JAMES SHAW of Tynron. (Abridged.)

To *Beat, Bete, or Beet, Beit.* To help; supply; mend by making addition; to add fuel to a fire; to make or feed a fire.

—Jamieson.

“Two fires on the anter she 'gan bete.”

—Ch., *Canterbury Tales.*

“They chant their artless notes in simple guise,
Perhaps Dundee's wild warbling measures rise,
Or noble Elgin beets the heavenward flame.”

—Burns's “*Cottar's Saturday Night.*”

In Tynron beeting a dyke means mending it.

Blae, livid.—*J.*

Ble, livid.—*Ch.*

“ Oh ! the bonny brackit lassie,
She's blae beneath the e'en.”—*Scotch Song.*

Bug and *Bugaboo*, a bugbear.—*J.* Bug is used in the sense of bogle or spectre by Shakespeare.

Bogle, a spectre. The word boggle, to start aside, swerve for fear, occurs in Shakespeare's “ All's Well that Ends Well.” Skeat believes the two words to be connected.

Brogues. In “ Cymbeline ” we have “ And put my clouted brogues from off my feet.”

Bulk, for whole body, equivalent to the Scotch word Buik, occurs in Shakespeare's Lucrece.

Bairn, a child.—*J.* In Langland's “ Pier's Plowman,” previous to Chaucer.

Bullyrag, to abuse another in a noisy manner.—*J.* Shakespeare in “ Merry Wives of Windsor ” has Bullyrook, a noisy, dashing fellow. To Bullyrag is known as slang among Cambridge students.

Belyve, *Blive*.—*J.* Immediately ; forthwith ; occurs in Spenser's “ Faerie Queen.”

Bucht, *Boughts*, a bending, a fold, a pen in which ewes are milked.—*J.* In Spenser, circular folds or windings.

“ Will ye gang to the ewe's buchts, Marion.”—*Scotch Song.*

Buff, a stroke ; a blow.—*J.*

Buffe, a blow ; a buffet.—*Spenser.*

Busk, to dress ; to attire oneself ; to deck.—*J.* This word is in “ Pier's Plowman.”

Byre, cow-house.—*J.* This is also a North English word. It is cognate to bower. While Scotland has retained byre a cow-house, England has retained bower as meaning an arbour.

Carle, a man ; a boor.—*J.* In Cymbeline we have

“ Could this carle,

A very drudge of nature, have subdued me ? ”

Chirkers, this is the Dumfriesshire word for crickets. In Chaucer to chirk means to chirp. The verb is given in *J.*, the Dumfriesshire noun under Charkers.

Cark, a load ; a burden.—*J.* We are familiar with it in the expression “ Cark and care.” In Spenser it means care.

Crag, *Craig*, *Cragge*, the throat.—*J.* This word was common in Renfrew when I was a boy. It is used in Spenser for the “ neck.”

Collic, shepherd's dog.—*J.* In Brockett's Glossary of N. English Words, 1825.

Daft. In Langland's "Piers the Plowman," it means a stupid, a dolt.

"Thou dobert, daffe, quo she, dull are thy wits."

Deck. In Moniaive old people talked of a deck of cards, meaning a pack. This meaning is not noticed by Jamieson.

Dwined, wasted.—*J.* Chaucer's "Romaunt of the Rose."

Dool, grief.—*J.*

And I alone left all sole,
Full of complaint and of dole.

—Chaucer's "Romaunt of the Rose."

To Drie or *Dre*, to suffer; to endure. Chaucer, *ibid.*—*J.*

Dicht.—*J.*, and in Dumfriesshire to clean, to wipe.

Dight, to order, prepare, dress, adorn.—Spenser.

Eild, *Eld*, advanced age, old people.—*J.*

"And doth beg the alms of palsied eld."

Sh. Measure for Measure.

Eyen. This plural, and also *shoon* for shoes, are found in all three authors.

Foissonless. We have this adjective meaning dry, sapless, without pith.—*J.* The word *Foysons*, for abundance, is found in Spenser and Shakespeare.

Feat. In the ballad of Aiken Drum, by a Galloway man, we are told of a wife "fond of a' things feat." Shakespeare uses *feat* in the sense of nice, exact. In "The Tempest" we have the comparative degree.

"Look how my garments sit upon me, much feater than before."

Fern, *Ferne*, before.—*Ch.* In *J.* *Fern* year, the preceding year. Mr Baird of Sanquhar has heard the word so used in South Ayrshire,

Frush, *Frusch*, brittle; dry; crumbling.—*J.* Shakespeare uses it as a verb, meaning to break.

"I'll frush it, and unlock the rivets all."—*Troilus and Cressida.*

Gab, to talk idly. In Chaucer it means to lie.

"Gab I of this?" *i.e.*, "Do I lie concerning this?"

Gipe, *Gipon*, *Jupe*, upper frock or cassock; a word known to country lasses of the old school. In Chaucer's "Romaunt of the Rose" and 75th line Canterbury Tales.

"Of fustian he wered a gipon.—*J.*

Glede, a burning coal.—*Ch.* In Captain Dennistoun's *Battle of Craigneddin*, published in Galloway about the beginning of the century. I don't recollect hearing the word.—*J.*

Geck, to befool.—*J.*

Geck, to deride, to toss the head in scorn.

“ And made the most notorious geck and gull
That our invention played on.—*Twelfth Night.*”

Gre, prize. To bear the gree, to carry off the prize.—*J.* The word is in the Knight's Tale, Canterbury Tales.—*Ch.*

Gate, a way. The word is used in this sense in Spenser.—*J.*

Gaukie, a foolish person.—*J.* The word is old English, and, like the word Gowk, its original sense is “Cuckoo.”—*Vide Skeat.*

Ged, a pike.—*J.* A N. English word from the Icelandic Goad, named from its sharp, thin head, as is also the name Pike.

Gled, a kite.—*J.* In Tynron we have the Gled Brae. “We have the word in English, 1690.”—*Skeat.*

Grab, to seize with violence. Noun. A snatch; a grasp.—*J.* Although the standard English word is Gripe, Grab is found as a “low word” in some English dictionaries.

Hyne or *Hind*, a farm servant.—*J.* The *d* is excrement. The word is in Spenser's “Faerie Queen” with the same meaning.

Hutch, a kind of basket in which coals are brought from the mine.—*J.* Shakespeare has bolted hutch, a chest for bolted flour. Chaucer uses the word in its sense of box or basket. It is of French origin.

Keek, to look.

“Auld Nicholas sat ever gaping upright, as he had kyked at the new moon.—*The Miller's Tale. Ch.*”

Kers, a water cress.—*J.* This old pronunciation of cress, given by Chaucer, explains the meaning of our common expression, “I don't care a curse,” *i.e.*, I don't care a cress, equal to I don't care a button.

Kith, *Kythe*, to show, to make known. This old Scotch word occurs in our metrical version of the Psalms, “Froward than Kytht.” In Chaucer's “Man of Lawes Tale” we have

“For but if Christ on thee miracle Kithe,
Withoute gilt thou shalt be slain as swithe.”

Loon, a worthless person, male or female, although in the east country I understand it always means a boy.—*J.* The word is spelled loon in “Macbeth” and lowin in “Othello.”

Maund, a basket. In Ayrshire a potato basket.

“A thousand favours from a maund she drew.”

—*Sh. Lover's Complaint.*

Mirk, dark, obscure.—Spenser's “Faerie Queen.”

Mall, *Mell*, a hammer.—*Spenser.* Its diminutive is mallet.

Neif, the fist. In "Midsummer Night's Dream,"

"Give me your neif."

Puttock, a worthless species of hawk. The word, I believe, is twice in Shakespeare.

"I chose an eagle and did avoid a puttock."—*Cymbeline*.

The interest that attaches to it is that it occurs in our well-known, world-known I might say, Galloway place name, Craigenputtock. A sparrow hawk is named from its habit of preying upon small birds. A puttock preyed on pouts, young game birds. Pout, sometimes spelled poult, is akin to our poultry or pullet. Oek is probably a corruption of hawk.

Quick. We have this word in the Creed meaning "alive." In the sense of "alive" it occurs in Chaucer and Spenser. In Dumfriesshire Quickens is the name for couch-grass, a grass possessed of wonderful vitality.

Ramps. The Tynron word for wild garlick (*Allium ursinum*).—*J*. Ramsons is the old English word.

Reechy, begrimed. *Rogge* or *Rug*, to shake. Are in the Chaucer, Spenser, and Shakespeare Glossaries.

Skarre, *Scarre*, *Scaur*, *Skair*.—*J*. Bare place on a hill. Rock through which there is an opening. Rock in the sea.

"Bank, bush, and scaur."—*W. Scott*.

Rock, precipitous cliff.

"Men make ropes in such a Scarre."—*All's Well that Ends Well*.

The word is in Wycliff's bible. In Orkney, Skerry a rock in the sea. I recommend study of the word as possibly throwing light on the name of the river Skarr, the principal tributary of the Nith, the most remarkable part of whose course is the precipitous rocks of Glenmarlin, near Penpont.

Skathe, harm, mischief.—Spenser's "Faerie Queen."

Stour, fight, stir, trouble, misfortune.—*J*. Dust in motion, trouble, vexation. With the first four meanings it is found in Spenser's "Faerie Queen."

"How gladly would I bide the stour,

A weary slave frae sun to sun."

—*Burns's "Mary Morison."*

11. "The Grave" at Conchieton, Borgue. By Mr FREDERICK R. COLES.

In this paper, which was fully illustrated with diagrams and plans, Mr Coles described an ancient burial place on the farm of Conchieton, in Borgue Parish, its main features being a *tumulus* of

small rounded boulders now much reduced in size, the diameter of it being twenty-three feet, and its height about five feet. Within this heap of stones stands a roughly-circular ring of whinstone slabs set on edge, eight in number, and varying in size from fourteen inches to three feet and over; and at about sixteen inches distance within them, the *Kist-Vaen* proper, an oblong cavity formed by four thin stones set on edge, and measuring three feet N. and S., one foot eight inches E. and W., and twenty-two inches deep. The slab covering the grave was broken in two, and on these two stones were noticed tool-marks, such as Mr Coles is led to believe may be genuine cup-marks.

At a distance of five feet from the south end of the grave stands the head-stone of roughish sand stone, abundantly weather-marked, the dimensions of which are:—Height above ground, three feet five inches; width, 1 foot nine; thickness, nine and a half inches. That there might be no doubt as to the genuine character of this burial-place, and especially of the position of the head-stone, Mr Coles produced evidence in a letter from (the late) Mrs Gordon, whose husband was proprietor of Conchieton, in which these points were certified; and the additional information gained that after a careful search Mr Gordon could find nothing in either bronze or stone, but a handful of brown decayed bones, this exploration of his having been conducted in 1844, and soon after the spot was built round, by Mr Gordon's orders, with a strong dyke planted with trees and ivy and ever since properly preserved.

Footnote.—It is noteworthy that on one of the slabs unearthed from the Cairn on Woodfield, High Banks, Kirkeudbright, during March this year, cup-marks of the same form and size were found as those mentioned above.

III. *Notes on the Difference between the Dumfries of Dr Burnside's MS. History and the Dumfries of To-Day.* By the Rev. ROBERT W. WEIR, M.A.

In 1790 Sir John Sinclair addressed a letter to the ministers of all the parishes in Scotland asking their assistance in the production of a statistical account of the country. He enclosed in each letter a list of 166 questions, under the four heads of "geography, and natural history," "population," "production," and "miscellaneous questions." The answer to the letter addressed to the minister of Dumfries was given by the Rev. William

Burnside, then minister of the New Church, afterwards minister of the Old Church. It is given in full in the MSS. book lately committed to the custody of this Society, and in an abbreviated form in the "Statistical Account of Scotland," edited by Sir John Sinclair. I have lately had an opportunity of again reading the MSS. book prepared by Dr Burnside, and have been much struck with the very able manner in which it is written. I am convinced that if printed and properly edited, it would form one of the best contributions to the history of Dumfries that has yet been made public. As a foretaste of what may be in store for those interested in this subject when some one with sufficient leisure, knowledge, and enthusiasm can undertake the work I have indicated, I give a few notes shewing some differences between the Dumfries described in Dr Burnside's Statistical Account and the Dumfries of 1889.

Regarding the first head of inquiry, that of geography and natural history, there is not much to notice. Physical conditions do not alter greatly in the course of a century. Under this heading he observes that the distempers, as he calls them, are fever, rheumatism, and consumption. In this respect there is much change for the better. Dumfries, thanks to improved sanitary arrangements, is now more free from fever than almost any other town in Scotland. As regards rheumatism, the statistics shew that Dumfries occupies about an average position, and in regard to consumption that the death-rate is, as it was a hundred years ago, very high. Dr Burnside refers to the well-known characteristics of our climate—the moisture of the air, the dryness of the soil, the short time snow lies on the ground, and the high winds which often prevail. There is mention of floods which are now unknown to the extent to which they existed a hundred years ago. "The parish is subject to considerable swellings of the river which often lay the lower part of the town under water. In the houses near the bridge it will sometimes rise two or three feet. These floods are most frequent towards the end of harvest and the beginning of winter. The two most remarkable of late were in October, 1778, and in November, 1772. It was in the last-mentioned flood that the Solway Moss was carried off."

There are more changes to note in regard to the second head of enquiry, "Respecting the population of the parish." The estimate of the population is given from information derived from parochial visitations made by himself and his colleague in St.

Michael's. The figures are not so absolutely reliable as those in the Government censuses of subsequent years. He estimates the whole population of the town as 5600 or nearly 6000 ; in the landward part of the parish, 1200 or 1400 more. In the calculations I have made for the sake of comparison I have taken the mean between these, 7000. The population of the parish in 1881, according to the census, was 16,841, or an increase of 9841. In an appendix to his book, Dr Burnside gives a detailed account of the population of the New Church parish in 1795. According to this statement in that year there were in the New Church parish 1014 families and 3800 individuals. In 1881 there were in Greyfriars' parish (which has the same boundaries as the New Church parish had in 1795) 949 families and 4259 persons, or a decrease of 65 families and an increase of 429 persons. It thus appears that the large increase in the population has arisen from new houses having been built and inhabited in the districts now known as the parishes of St. Mary's and St. Michael's. The increase in the population has been gradual. The census returns at the decennial periods of this century have been as follows: 1801, 7427; 1811, 9262; 1821, 11,052; 1831, 11,606; 1841, 11,409; 1851, 12,289; 1861, 13,323; 1871, 14,841; 1881, 16,841. In 1795 Dr Burnside and Dr Scott considered that there were in the town 1488 families of 5860 individuals. In 1881 there were in the three parishes 3568 families of 16,841 individuals. If we may venture to compare these figures we have in 1881 4·7 individuals to each family to 3·5 to each family in 1795. This would indicate an increase in the amount of employment for young people. Another point of comparison leads to the same conclusion. Dr Burnside states that of examinable persons—meaning by that persons above seven or eight—"we have three females to two males," a phenomenon which he accounts for by the scarcity of employment for men, and by the demand for female servants. The census returns for 1881 do not distinguish in any way the ages of the males and females, but they do not indicate that the disproportion referred to exists now to the extent which Dr Burnside pointed out. In 1881 there were 9037 women and 7812 men, or an excess of females over males of 1225. The number of births, marriages, and deaths, as computed by Dr Burnside, when compared with the recent returns of the Registrar-General, furnish no indication of any remarkable change in the proportionate number of these events.

An interesting field of comparison is opened up by a table given by Dr Burnside regarding the number of persons engaged in different trades in the town. The statistics are derived, as regards the trades, from the books of the incorporations, and as regards the others, it is supposed, from personal information. Unfortunately, the statistics regarding the occupations of the community in the census returns are given not for the parish, as Dr Burnside gives them, but for the parliamentary burgh. An exact comparison is therefore unattainable. The respective numbers, however, may be of some value as indicating any marked changes, and therefore I give them :

	<i>Per Cent.</i>		<i>Per Cent.</i>	
	<i>1791.</i>	<i>of Pop.</i>	<i>1881.</i>	<i>of Pop.</i>
Hammermen (blacksmiths, whitesmiths, tinsmiths, coppersmiths, and saddlers)	70	1	133	7
Squaremen (joiners, cabinetmakers, masons, glaziers, coopers, and slaters)	220	3	391	2
Tailors	85	1	186	1
Shoemakers	236	3	148	8
Skinners and glovers	23	3	26	1
Fleshers	33	4	81	4
Tanners, nailers, plumbers, brassfounders, silversmiths, watchmakers, dyers, and not incorporated	100	1.4	134	8
Bakers	26	3	116	6
Stocking-weavers	30	—	—	—
Writers	30	—	31	—
Physicians and surgeons	4	—	29	—
Ministers	8	—	30	—
Apothecaries... ..	4	—	29	—

These figures are very much what might be expected. There is in proportion to the population employment for fewer artisans now than there was a hundred years ago. The much larger production is more than counter-balanced by the amount of work done by machinery. Notably, the trade of shoemaker has undergone a very great diminution. On the other hand, bakers are twice as numerous as formerly, a fact no doubt to be accounted for by the much smaller amount of oat cakes and other kinds of bread now made at home. It is very remarkable that the additional 10,000 of the population requires no more writers. It is also noteworthy that while the population has more than doubled, doctors have been multiplied sevenfold, ministers threefold, and apothecaries sevenfold. The decrease in the number of men employed in the older trades is more than made up for by the number of new employ-

ments which have been called into existence, such as railway, telegraph, and post-office officials. Printers have also largely increased in number, and those employed in the manufacture of woollen goods very much more so. It could not be said now as it was said by Dr Burnside, "The spirit of industry is by no means so great among us as could be wished, and we have but few manufactures, owing in great measure, as it is generally thought, to the scarcity and dearness of fuel." In 1791 there were 78 persons licensed to sell spirits, or 1 to 89 people. This year we have 84, or 1 to every 150 people. In addition to the 78 persons who, on an average, were licensed annually, there were on an average about 20 persons fined for selling without a license. Dr Burnside makes the reflection on this point, which has so often since been made: "The use of spirituous liquors, and especially of whisky since its price was reduced, certainly does produce very bad effects upon the good order, industry, and health of the lower classes of the people. Unhappily, individuals themselves are not the only sufferers, for their wives and children are often in great distress and misery. Hence, too, many of the petty crimes, debts, &c., which swell the list of those sent to prison and the correction house."

In 1791 there were, according to Dr Burnside, only 38 Roman Catholics in the parish. This, it would appear, was an understatement, as in 1795 he discovered in the New Church parish alone 64. The great difference between the number of Roman Catholics a hundred years ago and the number at the present day reminds us of the fact that a large proportion of the new population has come from the sister island. In 1791 it was supposed that there were in the parish 200 belonging to the Relief communion, 150 Episcopalians, 270 Antiburghers and Seceders of all ages. The remainder were supposed to belong to the Church of Scotland. In those days there was one church for every thousand of the population. The proportion at this present day is about the same.

The productions of the parish were said to be wheat, barley, oats, potatoes, lint, and, in the neighbourhood of the town, garden stuff. A farmer gave Dr Burnside the computation that there are in the parish about 720 acres of oats, 240 of barley, 180 of wheat, and at least 100 of potatoes, 20 to 30 acres of peas, and as many of turnips. Rev. John Gillespie, Mouswald, has supplied me with the following notes regarding the present produce, for the purposes

of comparison. Almost all the grain crops in Dumfries now are oats—very little barley. In 1888 there were 559 acres of barley in the whole county of Dumfries. There were only 51 acres of wheat in Dumfriesshire in 1888, and only 27 acres of it in 1887, so that Dumfries parish in 1790 far exceeded in its growth of that cereal the whole county now. There is now a very large acreage of turnips. They were just beginning to be cultivated in small patches in Dr Burnside's day.

The yearly rent of the landward part of the parish in 1791 was £4017 6s 8d. The same last year was £20,998 6s 8d. This large increase has arisen largely from the great increase in the number of houses in the outskirts of the town. The only illustration I have procured of the value of a farm shows no increase at all in proportion with the total. Dr Burnside mentions that in 1737 no one would take a lease of Tinwald Downs when it was offered at a rent of £35 per annum. The same lands, he adds, after a considerable number of acres be taken off for planting, do not yield £300 a year, and at the end of the lease may yield £100 more. The rental in the roll for 1880-81 is £412. "Netherwood," he says, "was sold fifty years before for £4000, and now is estimated at £30,000." The rental of Netherwood in the roll is given at £241. The valuation of the lands within the burgh in 1791 was £2243 9s, and of the houses £12,293, or in all £14,536 3s 9d. The valuation last year was £68,132 11s 6d, or nearly six times as great. The rise in rents, to judge from the only example we have, has not been great, and the increase must arise largely from the larger number of houses and from persons living in better houses. In 1791 a house of three rooms and a kitchen let for £10 or £12. It now lets for £12 to £15.

Fortunately, Dr Burnside chronicled carefully the prices of provisions and the average rate of wages. We have thus the means of ascertaining the great increase which has taken place in the value of commodities. The prices then paid were: Salmon, 2½d to 6d per lb.; flounders, 1d to 4d; cod, ½d to 1d; beef, 3d to 5d; mutton, 3d to 4½d; lamb, 3d; pork, 3d to 4d; geese, 1s 6d to 2s 6d each; ducks, 6d to 8d; chickens, 7d to 8d per pair; butter, 7d to 9d per lb.; Scotch cheese, 3d; meal, 1s 6d to 1s 10d per stone; coals, 7d to 8d per cwt. "All kinds of butcher meat and poultry," Dr Burnside remarks, "are now double the prices they were twenty years ago. The natural progress of luxury, the fears occasioned by the American war, the increased circulation of

paper money, and, of course, the raising of rents upon the tenants have each contributed to this rise in almost all kinds of provisions."

The rise in the wages is as remarkable as the rise in the price of provisions. Labourers' wages were 1s per day; carpenters and masons, 1s 8d to 2s; tailor, his victuals and 6d; labourer in harvest, without food, 1s and 1s 1d; ploughmen's wages, 7 to 8 guineas; dairymaids, £3 to £4 per annum; maid servants in towns, £2 10s to £4; men servants, £7 to £9.

The schools receive warm praise. There were three established schools for English. The masters of these received £20 amongst them, 2s 6d a quarter from each scholar, and a Candlemas offering. There was one established Grammar School, the master of which had £47 a year. He got no fees from the children of burgesses, but 8s a quarter from others. The Candlemas offering amounted to about 10s 6d a head. The average number of scholars was 100. There was an established school for arithmetic, book-keeping, and mathematics. The master had £20 a year, 5s a quarter from the children of burgesses, and 7s 6d from others, and no Candlemas offering. The number of scholars was about sixty. There was also an established school for writing, where the master had a salary of £22, and the same fees as the master of the arithmetic school. The pupils were said to number about seventy. Besides these there were a free unendowed school for reading and writing, and two or three boarding schools for young ladies. It is also recorded that French, drawing, and dancing are very well taught. Unfortunately the details given do not warrant any comparison with the amount of the school accommodation or the number of children attending school at the present day. If we might hazard a conjecture, they were much behind what we now have, but in some respects considerably more adequate than the schools were immediately prior to the passing of the late Education Act.

The number of poor in 1790 occasionally receiving alms was at least 150. The Poor-house (Moorheads' Hospital) supported 45 to 50 persons. The whole sum expended on the poor, including mortification revenue of the hospital, amounted to £400. The poor rate last year was £2930. When we add to this the revenue of Moorheads' Hospital, of the Carruthers' Cottages, of the Menzies and Crocket Funds, and of other Trusts, we have a total of at least £3999. It would thus appear that the people a hundred

years ago spent on the poor £5 per hundred of the population, or £4 per £100 of the rental. We spend at least £25 per hundred of the population. The proportion as regards the rental is about £4 9s per £100.

It thus appears that a hundred years have brought great changes to the Queen of the South. The population has been considerably more than doubled, the yearly rental has been quadrupled, wages have increased about three-fold, and the price of most articles of food is more than doubled.

In Dr Burnside's time the town consisted, he informs us, of eight or nine streets and six or eight lanes. The streets would be the High Street, Friars' Vennel, the East Barnraw (now Loreburn Street), the West Barnraw (now Irish Street), the Kirkgate (now St. Michael Street), Townhead Street (now Academy Street), Lochmaben Gate (now English Street), and probably Queensberry Street and King Street. The new bridge was then unbuilt, and all Castle Street, George Street, and Buccleuch Street were fields or gardens. The Town Hall and Court-House were in the Midsteeple, and underneath that were the Weigh-House and the Town Guard House. In the block of buildings where Mr Adams has his bookbinding shop were the Council Chambers and adjoining that was the Prison. On the site of the Militia Barracks was a House of Correction. Moorheads' Hospital was scarcely fifty years old, the old Infirmary was recently erected, and the Theatre was just opened. The churches were St. Michael's—the only one which remains in external appearance as it was—the old New Church, the Episcopal Meeting-House in English Street, the Anti-Burgher Church on the site of Loreburn Street U.P. Church, and the Relief Church in what is now the wool store in Queensberry Street.

Dr Burnside, in various parts of his MSS., speaks with satisfaction on the improved condition of the people. He had met men who remembered when there were only four carts in Dumfries—two for hire and two the property of gentlemen who had purchased wood, and when all the ordinary transport was done by creels and sledges. He was proud of there being a stage coach daily to Edinburgh and an English and an Irish mail coach daily, and looked forward to there being before long a Glasgow coach. He mentions with satisfaction that a waggon from Carlisle, with six horses, comes to town and goes out again weekly, that there are eight or ten post chaises kept at the inns, that six families in the parish each keep a four-wheeled chaise, and that four have whiskeys.

He could tell of an improvement in the roads of the parish within the twenty years preceding the date of his book so great that one horse could now do the work formerly done by two. He could also say that "within these twenty years the poor people are both better fed and clothed. At that period they had no butcher meat, and few or no hogs at all." At the period of writing, he says that there was scarcely a day labourer but kept a hog, and laid in some quantity of meal at Martinmas. He remembered when there was seldom any good fresh meat to be had from about Christmas till the new grass came in the spring, but in his day it was to be had throughout the whole year in great plenty and of good quality. Very probably the generation a hundred years hence will look back on us, as we now look back on the generation in which Dr Burnside lived and as he looked on those further back still, and wonder how we fared with fewer comforts and fewer means of communication with other places. It may be well to remember that while we cannot wish back the good old times, we may yet believe that then as now there were men and women with good heads and good hearts, and that wisdom neither begins nor ends with the people of our own times. It is pleasant also to know that it is not true that the poor are poorer. What were rare luxuries to the poor are now easily obtained by the many.

Field Meeting. 11th of May. .

A visit was paid to Comlongan Castle and Ruthwell Church. The famous Runic Cross and the old tombs were inspected. Explanations were made by the Rev. J. M'Farlan and Mr Campbell Douglas, the architect of the part of the Church in which the cross stands. Mr Robert Barbour, Solicitor, Maxwelltown; Mr Davidson, Teacher, Ruthwell; and the Rev. Mr Milroy, Penpont, were elected members.

14th of May.

At a meeting of the Council the honorary secretary, Mr Robert Barbour, resigned his office, and received the thanks of the Society, on the motion of Mr John Neilson. On the motion of Mr Robert Barbour, seconded by Mr Neilson, Dr Edward James Chinnock was elected honorary secretary.

Field Meeting. 1st of June.

A visit was paid to Crocketford and Springholm. Auchencroch Loch was circumambulated, many botanical specimens being collected. At a meeting, presided over by Mr George H. Robb, Dr Clarke and Miss Tennant were elected members. Mr James Barbour exhibited a copy of Innes's History of the Buchanites, several leaves being in Innes's own handwriting, and also a copy of the proceedings taken against the Buchanites by the Sheriff Court. The party then drove along the old military road, round part of Milton Loch, and arrived at the Hills Tower, Lochrutton, which was inspected.

Field Meeting. 6th of July. (Described by Mr WM. DICKIE.)

A visit was paid to Whithorn, where Dr John Douglas and Mr William Galloway acted as guides. The ruins of the Priory were carefully examined, and then visits were paid to the Roman Camp, St. Ninian's Cave, and the ruins of St. Ninian's Kirk in the Isle of Whithorn. Finally the ruins of the old Norman church of Cruggleton were explored. At a meeting presided over by Major Bowden, Dr Douglas and Mr Galloway of Whithorn, Mr George Hamilton and Mr R. McConchie of Kirkeudbright, and Mr Alex. Ferguson, solicitor, were elected members.

It is the ruined Priory which invests Whithorn with such strong attractions for the antiquary, and to it the visitors proceeded, admiring by the way the ample thoroughfare and the tidy appearance of the long main street of the town. The existing charter conferring on Whithorn burghal rank and privileges was granted by King James IV., the most assiduous of the Scottish kings in his devotion to the shrine of St. Ninian, but it is understood that this was only a renewal of an earlier charter emanating from Robert the Bruce. The change of the commercial highway from the sea to the railway has injuriously affected it, like many other outlying towns, and has diminished its municipal revenue, of which the mainstay used to be the dues charged at the port of Isle of Whithorn, three miles from the town. But it bears its adversity placidly, and its appearance indicates a fair measure of prosperity among the burgesses. The old Town Hall and Tolbooth is a plain building, with square tower and extinguisher-shaped spire, surmounted by a ship in full rig by way of vane. It is not of great antiquity, having been built only about 1820; but it has already

been superseded for municipal purposes by a less obtrusive structure, but one more convenient and better suited to modern ideas. The present population of the burgh is about 1700.

St. Ninian, with whose fame the Priory is so closely linked, was the Columba of southern Scotland, and pursued his Christianising mission a century earlier than the apostle of Iona. The year 360 is assigned as the date of his birth, and his death is reported to have occurred in 432. The place of his nativity is a subject of dispute. One account represents him as belonging to a noble Scotch family, whose residence was in the vicinity of Whithorn. On the other hand, some of his biographers favour the idea that he was of Welsh nationality. Ireland, also, has put in a claim to be the country of his birth; but with less apparent probability. It is certain, however, that during the period of the Roman occupation he established a religious house at Whithorn, and with the aid of a body of disciples set himself to proclaim from this centre the message of the Cross among the pagan inhabitants of the country. Much success crowned his missionary labours, and posthumous fame enhanced the virtues of the saint and invested even his bones with miraculous power. Before devoting himself to the apostolic career, Ninian had visited Rome, where he received consecration at the hands of the Pope, and spent some time at the French monastery of St Martin of Tours. This noted soldier saint—from whom we derive our term Martinmas, and whose monastic habits have not been considered inconsistent with his selection as patron saint of the tavern-keepers—is in some accounts styled the uncle of St. Ninian; and to him the Priory in Whithorn is said to have been dedicated. A circumstance confirmatory of this is mentioned by Symson in his "Description of Galloway," who states that in 1684, when his work was written, there was "a little hand-bell in this church, which, in Saxon letters, tells it belongs to St. Martin's church." There is some doubt whether it was at Whithorn or at Isle of Whithorn that St. Ninian built the modest chapel—the "Candida Casa" or Whitehouse of early chronicles—that was the first stone and lime edifice built for Christian worship in Scotland. The balance of evidence seems to favour the Isle. But the modern burgh had apparently been the seat of his later ministry; and the undisputed historical record represents the Priory as the place of his sepulture.

The Priory of which the ruins now remain is of much more recent date, and would be of more extensive proportions than the

buildings of St. Ninian's day. It was founded in the twelfth century—in the reign of David I., the “sair sanct for the Crown”—by Fergus, Lord of Galloway, the reputed founder also of Dundrennan Abbey, and father of the founder of Lincluden Abbey. Almost the only fragment of it still standing above ground is a portion of the nave and of the lower walls of the steeple and porch at the west end; but recent excavations have opened up a double row of crypts beneath the chancel and transepts, and have revealed the foundations of other walls and a piece of causeway near to the modern Parish Church, about two feet below the present level of the ground. The church and monastic buildings must have occupied the whole of the present churchyard, the modern interments being made among their foundations, and to some extent in the debris which has accumulated around the old walls. This has made the work of excavation one of difficulty and delicacy, and has very properly prevented it from being pursued to the full extent which in other circumstances would have been desirable. The Priory enclosure had extended to the main street of the burgh, from which a long lane now leads to the churchyard gate. At the street end of that lane there remains in position an old arch or “pend” with a lion rampant and unicorn supporters sculptured in bold relief over the key-stone. This may either be the royal arms or the arms of the province of Galloway. The excavations have been conducted at the cost of the Marquis of Bute, with consent of the heritors of the parish, and under the direction of Mr Galloway. The general result is to show that the church had been in shape like a Latin cross, with north and south transepts, and that the monastic buildings had been to the north side, a position naturally determined by the position of the Kett, a stream which flows at the foot of a gentle declivity to the north, and would supply water for domestic purposes and also for the mill, which it is understood was attached to the Priory. The present church stands on the site of part of these structures. The date of its erection was 1822. Before that time the remnant of the Priory had been used for public worship. The modern edifice is apparently a commodious one; but its design is by no means artistic—a tower dressed with red stone projecting like an excrescence from a plain square building, whitened with a rough casting of lime. It so offended the susceptibilities of John Ruskin when paying a visit to the district that he declared he would gladly give £10 to help to remove the tower. The most notable feature in the Priory ruins

is a Norman doorway, of beautiful proportions and with richly carved arch, at the south-western corner of the nave. Mr Galloway is of opinion that this interesting fragment does not occupy its original position; and the presence of interpolated stones in the arch courses is apparent on a careful survey. It had probably been "restored" when additions were made to the buildings in the fourteenth or fifteenth century. But in any case we have preserved what is undoubtedly twelfth century workmanship. Several quaintly sculptured stones are built into the wall at the same place. In one of these a small animal is seen to be entering the mouth of a larger; and it has been conjectured that it may have been intended to symbolise the Christian's hope that death shall be "swallowed up in victory." On the outer side of the north wall are still to be seen some of the corbels which had carried the beams of the cloister arcade. The crypts to the east form a long double row, with barrel-vaulted roof; but the remains of two short pillars indicate that originally the more ornamental form of the groined arch had been used. In the northern-most crypt have been found remains of the red deer, the boar, and other animals of the chase, indicating that it had served the purpose of a larder. In one of the walls there is constructed a beehive-shaped apartment of which the purpose can only be conjectured. It may have served either as a punishment cell or as a place of solitary retreat for some of the more spiritually-minded brethren. Within the nave are two low tombs built into the southern wall, and enriched with dog-tooth ornament. They have no doubt been the resting-place of persons of distinction; but there is now nothing to indicate their name or condition, whether lay or clerical. In the course of recent excavations, the skeletons were found, in cists partly cut out of the rock and partly built, but there were indications that the graves had been previously opened. The nave is now a perfect antiquarian museum. There has lately been deposited within it, for better preservation, a curious monolith that long stood, like a mile-stone, by the road-side about a quarter of a mile from the burgh. On it are traced a peculiar combination of the circle and cross and this inscription, in irregular letters: "Lociti Petri Apustoli." (?) It is supposed to be as old as the fourth century, contemporary therefore with St. Ninian, and to have marked probably a place of worship dedicated to St. Peter. It is now taken under the protection of the board charged with the administration of the Ancient Monuments Act. Ancient crosses have been collected in large number

from the precincts of the church and from the surrounding district. The prevailing shape is the square cross, variously known as the Greek and Maltese, and the limbs are often indicated by five embossed circles. The larger shafts are generally ornamented with wicker-work or Runic pattern. On one small stone there are traced three Latin crosses close together, the one in the centre much larger than the others, a design obviously intended to represent the scene on Calvary. A large baptismal font, believed to be the one originally in use in the Priory, and elaborately sculptured corbel stones more or less entire, are also here preserved; and among heraldic devices the arms of the province of Galloway and the double chevron of the M'Lellan family are to be noted. A small bell, still intact, bears the date 1610, and appears from an inscription to have been cast in the city of Bruges.

Somewhat incongruously neighbouring the solemn mementoes of a devotional age is a stone which has upon it several words in large raised letters, some of which are now altogether effaced or so worn as to be illegible. Some ingenuity has been expended in the effort to give an English rendering to what was supposed to be obscure Latin. If we supply the missing letters in a manner suggested by their context, as Mr Galloway pointed out, we have, as will be seen below, an epigrammatic advice in homely Scotch phrase, viz.,

TENT T[O]
 DEI[G]HT
 WE[EL]

[*Anglice*—Be careful to clean well.]

The stone had occupied a place in the wall of an old farm building, where it would daily but silently admonish the household to habits of cleanliness.

In one of the apartments of the old Town Hall Mr Galloway has stored an extensive collection of fragmentary pieces of carving turned up in the course of the excavations. Some of these—notably a small but strikingly expressive face—convey a very high idea of the attainments of the early artists whose handiwork they were.

Having explored the Priory and its adjuncts as fully as time permitted, the company set out for St. Ninian's Cave, making by the way a short detour to see the large Roman camp on the farm of Rispain. A drive through a pleasantly wooded tract of country, and past the policies of Glasserton House

and Physgill, brought them to Kidsdale House. There they left the vehicles ; and, following first a shady footpath through a winding glen, and then a more open road-way, a mile's walk brought them to the shore of Luce Bay, at the little inlet known as Port Castle, from the scanty relics of an old fortalice that crowned one of the headlands. From this point the cave, which faces to the mouth of the bay, and is just above the tidal line, is plainly visible ; and only a short further walk over shingle and small boulders is necessary to reach it. The entrance is now closed by a stout metal screen, placed over it by Mr Stewart of Physgill, proprietor of the adjacent estate. The key is kept at Kidsdale House, and is readily given to responsible persons, as it was on Saturday. But the cave is so small that it can be fully surveyed from the outside. It might more appropriately indeed be termed a grotto. The rocks, which at this point are bold and precipitous, converge slightly in front of it, and probably a greater space was at one time under the natural arch. When the work of excavation was in progress a large piece of rock was lifted, which had obviously been detached from the cliff above ; and beneath it was discovered a human skeleton—possibly the victim of some forgotten tragedy, most likely one whom the falling rock had buried. The rough natural walls of the cell are coated with oxide of iron, and present a damp appearance, suggesting anything but a luxurious or wholesome retreat. It was known by immemorial tradition in the district as St. Ninian's or St. Ringan's Cave ; but it was only a comparatively few years ago that positive evidence of its monastic associations was discovered. The late Dean Stanley and Dr John Stuart of Edinburgh (author of "The Sculptured Stones of Scotland") were on a visit to the district, and one of their party traced upon the rock near to the cave the faint outline of a small cross. Further search has revealed the existence of four of these sacred emblems, both the Greek and Latin form being used. Excavations were thereafter undertaken, at the instance of Mr Stewart of Physgill, and carried out with great care under the personal superintendence of Dr Douglas, of Whithorn. A low wall in front of the cave was taken down (but afterwards re-built), and several small stones with crosses incised on them were found in it. Debris was removed, which had accumulated at some points to a depth of six feet, and a rough flag pavement exposed in part of the cave, the rest of it being paved with hard beaten earth. In the

pavement was a stone with a rudely carved inscription, of which only this fragment remained :

SANCT
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This stone was lifted, and affixed to the wall of the cave for better preservation, but some mischievous youths broke it. The protecting grating was put up to prevent further malicious acts, and the fragments of the stone were taken for greater security to Kidsdale House. Numerous incised crosses were exposed—in all seven on the living rock and twelve on separate stones. Some of these are of the rudest and most primitive workmanship, and are approximately assigned to the fourth century. Others are more elaborate, and shew Runic ornamentation. At the entrance to the cave was also found a stone with a large cup hollowed out in its centre, so placed as to receive the drip from the rock, and with a drain laid from it to carry the overflow into the centre of a mound at a little distance. Probably this was a semi-natural baptismal font, or it may have been simply used as a receptacle for the collection of pure water. The cave has shared in the veneration attaching to the shrine of St. Ninian, and was also a common resort of pilgrims. The smooth surface of one of the rock faces bears a great many initials of visitors. Most of these are quite modern ; but the antique form of the characters as well as the dates attached shew that in several instances we have here preserved the rude chiselling of men who lived two centuries or more ago. Such are these : “ I [or J] P, 1634. I L, 1664. I C, 1678. A M, 1684.” No doubt James IV. and other royal pilgrims would also visit the cave, but the stone bears no record of this.

In withdrawing to this remote and sea-girt retreat for purposes of meditation or penance, St. Ninian would be following the example of his teacher, St. Martin, and of other early Churchmen ; and there is every reason to believe that it would be used by him as an occasional residence. The scene is one fitted by its solitude and grandeur deeply to impress a reverent mind. The seaward prospect from the beach or the cliffs above is also in clear weather a charming one, embracing the Mull of Galloway, the peaks of the Isle of Man, and a part of the Irish coast. The visitors on Saturday saw it under the disadvantage of a haze, which obscured the distant land points ; but a flowing tide, under a brilliant sun, and the water flecked by an occasional sail, made up a picture of no small beauty.

They drove next across to the shore of Wigtown Bay, to the Isle of Whithorn. This is a tidy village of considerable size, built along the landward edge of what has at one time been an island, but by artificial banking has been converted into an isthmus, with a good pier and harbour, and having in it a turreted mansion, of which Symson in the seventeenth century speaks as "the Isle, a good stonehouse, which belongs to Patrick Huston of Drummaston." There are two rounded isthmuses—the inner and outer Isle. At the seaward side of the former are still standing the walls of a small chapel, roughly built of whinstone and shell lime. Its outer measurement is only twelve paces by seven. This building is believed to belong to the fourteenth century, and would be served by monks from Whithorn Priory. Beside it are traces of older foundations, supposed to be those of the original Candida Casa of St. Ninian, which is referred to by old writers as having been a land-mark for sailors and being surrounded on three sides by the sea. A life-boat house is now built on the same neck of land, and so situated that the boat can be launched into a bay either on the north or south, as the direction of the storm may render necessary. Traces of a triple line of ancient fortifications may be discerned on the two Isles.

Instead of returning direct to Whithorn, the party drove along the coast line of Wigtown Bay to Cruggleton Chapel—a small pre-Reformation building, and the church of an ancient parish, now united with Sorbie—which is in process of being restored by Mr Galloway, at the instance of the Marquis of Bute.

Field Meeting. 7th of September.

A visit was paid to Dornock Churchyard, where Mr John Nicholson pointed out some ancient sepulchral monuments. The Lochmaben Stane at Old Graitney was next inspected, and then Graitney Churchyard was visited. The antiquities of the place were explained by the Rev. William Bell of Graitney. Stapleton Tower was next explored, and, on the return to Annan, Mr Frank Miller acted as guide to Edward Irving's birthplace and his father's tannery. The Rev. William Bell, Mr John Dunlop, teacher, of Dornock; Mr John Nicholson of Stapleton Grange; Mr and Mrs Gunning, and Miss Hamilton, of Castlebank, were elected members.

Meeting of Council. 25th of September.

It was agreed, on the motion of Mr James Barbour, to hold an exhibition in November of the Baxter Bequest of mineralogical specimens, and of other interesting articles, together with the portraits of celebrated natives of the district.

The Kirkmadrine Crosses.

Note.—See p. 53.

I gladly add this note to my paper at the request of the Hon. Secretary in order further to emphasise the two points for which it was chiefly written, viz., to draw public attention to the neglected condition of these primitive grave-stones; and to strengthen my theory now for the first time, so far as I know, put forward that the Church of Kirkmadrine was originally dedicated to St. Martin of Tours.

The opinion of all learned antiquarians was summed up by Dean Stanley in 1872 when he wrote that, "Nowhere in Great Britain is there so ancient a Christian record." These stones were scheduled in Lubbock's Act, and yet no practical steps have been taken for their preservation, but they still serve as gate-posts and parts of the churchyard wall of Kirkmadrine. They had been carefully preserved until the Reformation, probably within the church (like the Ruthwell cross, which was not turned outside of its sacred edifice until after 1772); but now the sacred symbols and inscriptions upon them are almost illegible. It was anciently the custom to bury the dead and set up their tombstones within the church, but this was limited to priests in the 10th century (Bloxam's Gothic Archit. III., 11 Ed., p. 371). They should be removed to the Antiquarian Museum in Edinburgh, where there is a large collection of incised stones and also what is believed to be the first church bell, of *Candida Casa*.

In regard to the second point, it is well known that when St. Ninian was building *Candida Casa*—the first church of stone instead of wattles in Scotland—he heard of the death of St. Martin of Tours, A.D. 397, who had been his revered teacher, intimate friend, and generous helper towards its completion, and that he forthwith dedicated the church to his memory. But when Ninian died, A.D. 432, this church became the shrine of his grave, to which countless pilgrims resorted down to the time of the Reformation; and there is every probability, I think, that after that

event the people of Galloway would wish a church specially sacred to the memory of St. Martin. Apart from the personal relationship between these two, the Gallican Church had then and for long afterwards supreme influence in this country. There was a church erected to his memory at Canterbury so early as the 5th century, and out of 160 churches subsequently built, those at Hexham, Ripon, Jarrow, and Monkwearmouth were erected by masons and glaziers from Tours in the 7th century. The ancient liturgy of the British Church was derived from the Gallican Church, and the name of St. Martin of Tours occurs not only in pre-Reformation kalendars but in one of A.D. 1587 affixed to "The cl. Psalmes of David in Meter, for the use of the Kirk of Scotland." (Bp. Forbes's Kal., p. xlii).

There was no one whom the Church more delighted to honour; and in answer to the question, What mean these stones? I think I may with reason say that they commemorate Romano-Gallican priests who in the 7th century ministered in Kirkmadrine Church, then erected to the memory of *Sanctus Martinus*.

J. G. H. STARKE.

SESSION 1889-90.

4th of October, 1889.

ANNUAL MEETING.

Major BOWDEN, Vice-President, in the Chair.

New Member.—Mr R. M'Glashan, of the Inland Revenue. Mr Robert Barbour (late secretary), was elected an honorary member in consideration of his services to the Society.

Death of Dr Grierson.—The following resolution was passed :
“This Society records its deep regret at the death of its ex-President, Dr Thomas Boyle Grierson, of Thornhill, and desires to express its sympathy with the surviving relatives on the great loss they have sustained, and its admiration of Dr Grierson's personal character, scientific attainments, and wide philanthropy.”

SECRETARY'S REPORT.

The Secretary (Dr Edward J. Chinnock) then read the annual report.

The membership of the Society now numbers 198 ordinary members, of whom 20 have been admitted during the session now closing. There are also 7 life members and 19 honorary members, making 224 in all on the roll. The Society has sustained a loss in the resignation of its Secretary, Mr Robert Barbour, in May. The vote of thanks passed by the Council for his indefatigable services doubtless expressed the unanimous feeling of all the members.

Seven Winter Meetings and four Field Meetings have been held during the session. At the former 16 valuable papers were read, all showing laudable research, and some of very great interest. The papers read by Messrs Aitken, James Barbour, and

Weir, may be mentioned as particularly interesting without detracting from the merits of the other contributors.

The thanks of the Society are due to the painstaking scientific investigations of Messrs Andson, Hastings, M'Andrew, and Corrie. The President is desirous of obtaining help from members in collecting specimens of the shells of the district. It should be the aim of all the members to obtain the support and assistance of their scientific friends in carrying out the objects for which the Society exists.

Of the Field Meetings those to Whithorn and Gretna were particularly interesting and successful. It is a pity, however, that in these excursions, while archæology has been well represented, the natural history subjects have been somewhat neglected.

The museum has been enriched by our undertaking the custody of the geological and other specimens, as well as a collection of coins, bequeathed by the late Mr William Baxter to the Town Council. The resolution of our Council to hold an exhibition of these in November will give the public an opportunity of inspecting this valuable collection.

In connection with the British Association the Rev. Mr Andson has undertaken to keep a register of the temperature, &c., of the River Nith, and under his direction, and with the consent of the Town Council, a gauge has been fixed on one of the piers of the New Bridge for taking the depth of the water.

During the session we have lost our two most distinguished members, the one an antiquarian, the other a scientist. They were both natives of the burgh and men of whom Dumfries does well to be proud, and whose memory we should delight to honour. Mr William M'Dowall, in his books relating to his native town and Lincluden, could have said with the poet "*Exegi monumentum aere perennius.*" In regard to our venerable friend and ex-President, Dr Thomas Boyle Grierson, it is difficult to say whether his attainments as a scientist and a philosopher or his unaffected simplicity of character as a man was more to be admired. His mind was stored with knowledge of the most varied kind, and yet he was as free as a child from assumption of superiority over those less richly gifted. He spent the best part of his life in imparting to others what he had acquired, and he seemed to carry out the view of Epictetus, whose works he greatly admired: "God has introduced man into the world to be a spectator of Himself and of His works; and not only to be a spectator but an intrepeter."

TREASURER'S REPORT.

The Treasurer (Mr James S. Thomson) read his annual report.

CHARGE.

Balance from Session 1887-88	£0 16 0
124 Ordinary Members' Subscriptions (2s 6d)	15 10 0
6 New do. (entrance money, 2s 6d)	0 15 0
39 Transactions sold at 1s	1 19 0
Interest on Sums lodged in Bank	0 6 7
	£19 6 7

DISCHARGE.

Postage and Bank Charges	£0 1 9
Salary to Hall-Keeper	1 10 0
Secretary's Expenses (Mr Barbour)	2 0 0
Do. do. (Rector Chinnock)	0 11 7
Copy Dr Burnside's History of Dumfries	2 2 0
Periodical and Stationery Account	6 15 8
Bridges, slater	0 16 8½
Commission of Collector	0 18 3
Flood Gauge on New Bridge	0 5 0
Gas Account	0 3 9
Lodged in Savings Bank to Credit of Society	3 7 2
In hands of Treasurer	0 14 8½
	£19 6 7

October 4th.—Examined the year's accounts, compared with vouchers, and found the above abstract leaving a balance of 14s 8½d in hands of Treasurer correct.

THOMAS LAING.

ELECTION OF OFFICE-BEARERS.

The following were elected office-bearers and members of the committee for the ensuing session :—President, Richard Rimmer, F.L.S. ; Vice-Presidents, Major Herbert G. Bowden, Wellwood Maxwell, William J. Maxwell, and James G. H. Starke, M.A. (advocate) ; Treasurer, John A. Moodie ; Secretary, Edward J. Chinnock, LL.D. ; Members of Council, Rev. Wm. Andson, James Barbour, James Davidson, William Dickie, Thomas Laing, James Lennox, Robert Murray, John Neilson, M.A., George H. Robb, M.A., and James S. Thomson.

1st of November, 1889.

Major BOWDEN, V.-P., in the Chair.

Exhibition.—The Secretary intimated that the Council had resolved to hold an Exhibition of the Baxter Bequest and the

portraits of Dumfriesshire and Galloway worthies and other objects of local interest, on Tuesday, the 12th of November, till Saturday, the 16th. Messrs Barbour, Chinnock, Davidson, Dickie, Lennox, and Moodie were appointed a sub-committee to manage the Exhibition.

Donations.—Smithsonian Report for 1886, from Washington; Transactions of the New York Academy of Sciences; Proceedings of the Canadian Institute, Toronto; Proceedings of the Academy of Sciences, Davenport, Iowa; Essex Naturalist from January to June, 1889. Mr J. S. Thomson presented a fine specimen of blue from Kimberley Diamond Mine.

COMMUNICATIONS.

I. *Notes on the Minerals of Dumfries and Galloway.* By Mr PATRICK DUDGEON of Cargen.

Until comparatively recent years the greater part of this district has been almost a *terra incognita* as regards Mineralogy, with the exception of the district of Wanlockhead and Leadhills, which has for long attracted the attention of Mineralogists, from the variety of beautiful specimens found there. One seldom finds in any mineralogical work any notice of minerals to be found in this south-west corner of Scotland; of course a few have been noticed, and the late Mr Copeland of Blackwood called attention to several mineral localities in the district, but he does not appear to have extended his researches to any great extent in Galloway. Of course, Mineralogists are attracted in their search for minerals to places where mining operations are going on, or where they have been carried on, as it is from lead, copper, iron mines, quarries, &c., that mineralogical specimens are most likely to be procured, for reasons which will be obvious to every one.

Few metallic mines have been worked in the Stewartry, and none that I am aware of in Wigtonshire, and none with any great success. Many *trials* for lead, copper, and iron have been made in different parts of the country, which have been abandoned, but they have given mineralogists opportunities they might not otherwise have had of making many additions to the very meagre list of our local minerals, which, until very lately, were to be found in mineralogical works. Since more attention in this direction has been turned to this part of the country, a very large number of

minerals, never before recorded as belonging to the district, have to be added to the list, and one new to science.* I leave out for the present the mining districts of Wanlockhead and Leadhills, which have been long well known—they are the only important metaliferous mines in the district. The Blackcraig mine, near Palnure, which was worked for lead for a good many years, but lately abandoned, produced very fine specimens of Dolomite, some of the crystals being of a fine purple tint, probably derived from the presence of manganese. I found there some very remarkable forms of Iron Pyrites—forms I had never before seen. The Pibble mine, about five miles north-east of Creetown, was long worked for lead, and large sums have been expended in opening it up; it has resulted in a heavy loss to the promoters; the usual lead and other minerals are to be found amongst the old heaps, but no very striking specimens. At Lackentyre, up the valley of the Fleet, Gatehouse, there are the remains of lead and copper workings, long since abandoned. Wulfenite (molybdate of lead) is found there—the only locality in Britain for this mineral. There are also the other usual lead and copper minerals. Hematite mines exist near Auchencairn (not now worked), and trials have been made in the neighbourhood for copper, which exists, but not in anything like paying quantities. The usual copper ores are found in the old heaps. Copper has been tried for about half-way up the west side of Cairnsmore; the working there appears to have been very superficial; good specimens of Chalcopierite were found in the heaps. Several trials for lead were made some years since along the side of the Monypool Burn, near Creetown. The lead was not found in paying quantities, and they were soon abandoned. I was fortunate to find there a thin veil of Kupfernickel and Arsenic. The only other places which I know of in Scotland where Kupfernickel has been found are Wanlockhead and Hilderstone, in Linlithgowshire; it was in the vein on the Monypool Burn I found the new mineral above referred to. Up the Kinharvy Burn, above Kinharvy House, one or two manganese minerals are to be found, and very good specimens of brown quartz; Antimonite was said to be found near that locality; I have looked for it very carefully, but never found a trace of it. Zircon also was said to be found in the Criffel granite; Mr Copeland mentions he could never find it; I have looked very carefully for it, and broken up many

*Mineralogical Mag., Vol. VIII., p. 200.

hundred pieces of granite in the search, but have been equally unsuccessful. There can be little doubt, I think, that crystals of Sphene, which are found in this granite, have been mistaken for it by careless observers, as some of the Sphene crystals, superficially looked at, somewhat resemble Zircon in colour and form; I think, too, that broken pieces of Psilomelane must have been mistaken for Antimonite, at Kinharvy, although there is little resemblance between these two minerals. Although I never found Zircon in the Criffel granite, my friend, Professor Heddle, and I were fortunate enough to find Allenite in it; this mineral is sparingly found in some of the granites in the north of Scotland. We also found in this granite, for the first time in Britain, the rare mineral Gadolonite; it exists very sparingly; since then we again found this mineral in the granite from Ben Loyal, Sutherlandshire. I may just allude to an instance showing the importance of being able to recognise granites from their enclosed minerals. A gentleman who was engaged in the investigation of the drift beds and boulder clays in the north-west of England and North Wales wrote to me that he and Professor Bonney had a strong impression that many of the boulders in these drift beds had come from the south of Scotland, and asked me if I thought I could identify any of the granites and rocks from this neighbourhood. I wrote to him I should be glad to assist him. He sent me a large number of rock specimens from the drift and boulder clays in the neighbourhood of Liverpool and North Wales. I found I could say with a great degree of confidence that many of the granites and rocks sent were from this district, as I found crystals of Sphene in them, and I was quite certain that this was the case when I found, by great good fortune, a crystal of Allenite in one of the pieces of granite. It was more than a thousand chances to one finding this crystal of Allenite, as it is rather a rare mineral to find in our granite, even when carefully looked for.* I have never found Sphene in the granite of Cairnsmore, but fair specimens of Epidote are to be got in the granite quarry near Creetown, and in some other localities—generally poor. Amethyst and Smoky Quartz (Cairngorm) are found on Criffel and a few other localities. The former is very abundant on the west side of Criffel, above Southwick House; more sparingly near Dalbeattie. Clear crystals of Amethyst, suitable for jewellers' purposes, are rarely found; I have

* "Quarterly Journal of the Geological Society" for May, 1883, p. 119.

never been fortunate enough to find any ; I have been shown cut stones of very good colour and transparency, said to have been found in the district, and have no reason to believe they were not so. The crystals from the west side of Criffel are often large, showy specimens, very suitable for rockeries, &c., for which they are used. Smoky Quartz is not so abundant ; I have found some tolerably clear crystals up the burn behind Kinharvy House, which, no doubt, came from the Psilomelane vein. Ordinary quartz crystals are found in many parts of the district ; no very good ones, so far as I know, are to be had except at Wanlockhead, where good specimens can be obtained. Calcite is, of course, found in many localities ; I have found very good specimens at Black Craig mine, and fair ones have been got at Arbigland. Very fine Calcites are found at Wanlockhead. A vein of Molybdenite was at one time worked to a small extent at Almorness Head, Buittle ; I have little doubt it was worked under the idea that it was graphite, which it somewhat resembles. Many mistakes of this kind are made from ignorance, and much money consequently thrown away. I have on several occasions seen bright yellow scales of Mica and pieces of Iron Pyrites sent from abroad under the idea they were gold ; and one of those so-called " mining experts " told me he was sure I " had a mine of wealth on Cargen," and advised me to bore for coal ! Some years ago a firm of iron and coal proprietors, under the advice of one of these quacks, spent several thousand pounds in the vain hope of finding lodes of Hematite on a property in this immediate neighbourhood. It has been said, and even stated in some publications, that Platinum was found in the water of Urr, near Dalbeattie ; from all I can ascertain, this statement is utterly unfounded. Pyrrhotine, it is also stated, has been found on Criffel ; I have never come across it, but Magnetite is occasionally found there, and in other places in the district. At Glendinning, in Eskdalemuir, an Antimony mine was at one time worked, and I hear it is, or about to be, re-opened ; if so, some interesting minerals are likely to be again obtained ; besides Antimonite and Cervantite, in the old heaps I found Valentinite—the first time, I think, this mineral has been found in Britain ; at least, there is no mention of it as being a British mineral in any mineralogical work ; I also obtained some interesting Pseudomorphs there—Cervantite after Valentinite, and Cervantite after Antimonite. An Antimony mine on the south spur of Hare Hill, between Kirkconnel and New Cumnock, was at one time worked ;

when working there I was not quite sure whether the workings were in Ayrshire or Dumfriesshire—they are close on the march of the two counties—so I will just mention I found Kermes (red Antimony) there, with the other usual Antimony minerals; I do not include this locality in the lists of minerals annexed to this paper. The rich field for minerals at Wanlockhead and Leadhills I need not further allude to, beyond saying that exceedingly fine specimens of Calcite, Barytes, Galena, Smithsonite, and Vanadinite are to be obtained there. Dr Wilson of Wanlockhead has done much of late in developing the minerals of that district, and has made a very fine collection; he has most kindly contributed some very fine specimens to the Observatory Museum. Leadhills is actually in Lanarkshire; the places are so near together, and the minerals of both localities are so nearly identical, that they may be classed in one list. Gold was at one time worked for over a large area in that district, and was all obtained from the alluvial deposits in the various valleys. That the gold originally came from quartz “reefs” containing the metal there can be no doubt, but none of these reefs, if they still exist, have been discovered; many pieces of quartz containing gold have from time to time been found by the miners and others, and one tolerably large piece of quartz showing a good deal of gold is now placed in the Museum of Science and Art, Edinburgh, and is well worthy of attention. The late Duke of Buccleuch ordered a lithographic plate to be made of this interesting specimen, a copy of which will be found in the Observatory Museum. Atkinson, in his “*Discoverie and Historie of the Gold Mynes in Scotland*,” 1619, mentions that a Mr George Bowes obtained from James VI. a permit to work the gold mines in Scotland, that at Winlocke Head he discovered “a small vaine of gold which had much small gold upon it.” He swore his workmen to secrecy, and after working the vein for some time, carried off to England a considerable quantity of gold; before leaving, he caused the shaft to be closed up and concealed; this vein appears to have been looked for, and is alluded to by several other parties about this time; it has never been re-found. In the preface to a French account of the reign of James V., a translation of which was published in London in 1710, it is said that “in the King’s reign (James V.) gold mines were found in Crawford Moor by the Germans, which afforded the King great sums. The Scots did separate the gold from sand by washing.” And again—“In James V.’s time 300 men were employed for several summers in

washing gold, of which they got above £100,000 English money." In a memorandum by Robert Seton, *temp.* James V., it is stated gold has been found at Newtoun, in Angérs (?); Cartburn, in Annandale; Solway Sands, near the new town of Annand; Glen-naip, betwixt Carrick and Galloway; Galloway, in the Barony of Terregles; and in a hill called Colochere Hill; in the Hill of Skrill (Screel of Bengairn ?) "*mucho oro y grandes pedacos.*" As to these localities mentioned by Seton, I have never met with any notice of gold being obtained from any of them other than in the above-quoted memorandum. Gold can always be found in the Wanlockhead district; it is rather wet and dirty work obtaining it; and what with employing men to dig in the alluvium and assist in washing, any I have got myself has cost about a shilling a grain, the intrinsic value being about twopence. Wanlockhead lead contains about five to seven ounces of silver to the ton; the two metals are separated by Pattinson's beautiful process.

I attach lists of minerals to be found in the different localities in the district, so far as I know. I have not a doubt, however, but that the lists can be extended. For instance, I have never found such a common and widely distributed mineral as Garnet, which, I cannot help thinking, must exist somewhere in the district. I must, however, now leave further research in this direction to younger hands, feeling assured that perseverance, particularly in the remoter parts of the district, will be attended with success.

I think it should be one of the first objects of this Society to make as complete lists as possible of all the natural productions of the district. If all societies similar to ours did so, a mass of information would be obtained of the greatest use to all interested in the different branches of Natural Science, and at the same time save specialists an immense amount of unnecessary labour.

DUMFRIESSHIRE.

WANLOCKHEAD (including LEADHILLS).—Anglesite—Arragonite—Asholane—Aurichalcite—Barytes—Calamine—Calcite—Caledonite—Cerussite—Chalcedony—Chalcopyrite—Chalybite—Chessylite—Chlorite—Chrysocola—Dolomite—Erythrine (Cobalt bloom)—Galena—Gold—Greenockite—Hematite—Jamesonite—Jasper—Kupfernicker—Lanarkite—Leadhillite—Limnite—Linarite—Lydian-stone—Malachite—Melaconite—Mimelite—Minium—Mountain-wood—Mountain-leather—Plumbo-calcite—Plumbo-

nacrite—Psilomelane—Pyrites, iron—Pyromorphite—Quartz (rock crystal)—Smithsonite—Strontianite—Susannite—Vanadinite—Vanquelinite—Wad—Zinc-blende.

WESTERKIRK, *Glendinning*.—Antimonite—Calcite—Cervantite—Pyrites, iron—Valentinite—Zinc-blende. *Pseudomorphs*—Cervantite, after Valentinite—Cervantite, after Antimonite.

CANOBIE.—Selenite (Fibrous Gypsum). Coal.

SANQUHAR.—Calcite—Coal—Pyrites, iron.

MOFFAT, *Hart Fell*.—Alum-shale—Selenite.

GALLOWAY.

ANWOTH, *Lackentyre*.—Anglesite—Calamine—Calcite—Cerusite—Chalcopyrite—Chrysocolla—Galena—Malachite—Pitchy Copper Ore—Pyromorphite—Vanadinite (?)—Wulfenite.

BUITTLE, *Craignair*.—Amethyst—Sphene.

„ *Almorness-head*.—Molybdinite.

GIRTHON, *Pibble Mine*.—Anglesite—Cerusite—Chessylite—Chrysocolla—Galena—Malachite—Pitchy Copper Ore—Pyromorphite—Smithsonite—Towanite—Tungstate of Lead (?)

KIRKMABRECK, *Monypool Burn*.—Annabergite—Asbolane—Cerusite—Dudgeonite*—Erythrine—Galena—Kupfernickel—Pyromorphite.

KIRKMABRECK, *Cairnsmore*.—Chalcopyrite.

„ *Creetown, Granite Quarry*.—Epidote.

MINNIGAFF, *Black Craig Mine*.—Calcite—Dolomite, white and purple—Erythrine—Galena—Pyrites, iron—Zinc-blende.

NEWABBEY, *Criffel*.—Allanite—Amethyst—Gadolonite—Magnetite—Pyrrhotine (?)—Sphene.

NEWABBEY, *Kinharvey*.—Psilomelane—Smoky Quartz (Cairngorm)—Wad.

NEWABBEY, *Kirkbean*.—Calcite.

RERWICK, *Auchencairn*.—Chalcopyrite—Chessylite—Chrysocolla—Hematite—Malachite—Pyromorphite.

TROQUEER, *Kirkconnell*.—Barytes—Wad.

„ *Craigbill*.—Hematite—Sphene.

„ *Lochanhead*.—Epidote.

Quartz, Felspar, Mica, and Hornblende, the main constituents of Granite, are of course abundant in the district, but with the exception of the first, are seldom met with in distinct crystalline forms.

* Discovered by the author of this paper.—EDITOR.

Iron Pyrites is a very widely distributed mineral, and may be found almost anywhere ; in the above lists, only localities are given where really good specimens can be got.

II. *On the Anatomy of Arion hortensis.* By Mr JOHN RUTHERFORD
(late Secretary).

It was through some remarks and suggestions of our President, that I was induced to take up the study of the structure of this slug. The whole of the work, including the diagrams, is original.

Arion hortensis belongs to the family, Limacidae—Genus *Arion*. This slug is very common ; may be found almost everywhere in company with *Limax agrestis* and other representatives of the slug family, and, after a little eye-training, its special characteristics become quite familiar. It has many varieties of colour, its fixed and marked distinctive features being its lateral longitudinal bands, running from the caudal gland along each side of the body, crossing the mantle on the upper margin of the respiratory orifice, and terminating at its anterior edge. It has sometimes a narrow border of grey, rufous, or orange colour. The foot is often tinged with yellow, the dorsal part a darkish grey. Length is from $1\frac{3}{4}$ to 2 inches. It has four anterior processes, two superior, and two inferior. The latter pair I believe to be feelers, in which is located the sense of smell. The superior pair, which are slightly knobbed, are the eyes, the eye proper occupying the knob or apex of the process. It has *cornea*, *crystalline lens*, *choroid*, and *optic nerve* ; is very short-sighted, not having any distinct vision beyond a quarter of an inch. The advantage of these pediculated eyes to the animal must be great, as it can turn in any direction (voluntarily) one eye, or both. The eyes, with their columella, can be drawn into the body by the retractor muscle, which is attached in such a way that the eyeball is first turned round, then the columella is drawn in, exactly as the finger of a glove would be if a string was fastened to its inside point and drawn into the palm. To extract the crystalline lens, snip off the eye with a pair of scissors, put under pressure under the microscope, when the lens will be forced out of its place and will float in the surrounding fluid.

The appendage known as the *mantle* is a fold or overlapping of the integument, in the right border of which is the respiratory orifice. Under the fold, on the same side, is the vent and common

generative orifice. There is a caudal slime gland, with a very short duct. The gland is in the substance of the skin.

After killing the slug, with the scissors cut down the centre of the foot, commencing behind the buccal mass, then pin down to the dissecting table by the edges of skin ; remove the visceral mass, and lay aside in water for future examination. There will remain attached to the skin the *retracted eye*, with its *retractor muscle* ; the cut attachment of the *generative organ* ; the *vent* ; the *heart* ; *pericardium* ; *aorta* ; *vena cava* ; *lung*, with *pleural membrane* ; and the *retractor muscles* of the head and inferior antennæ.

Respiratory System.—Breathing is carried on through the pulmonary aperture which leads into the lung cavity. In inspiration, the muscle which lines the floor of the mantle contracts and bulges it up, and air is drawn in when the muscle relaxes ; the mantle flattens and the air is expelled. The pleural membrane envelops the heart, pericardium, and lung, and is attached to the skin by its border.

Shell.—Molluscs without any external shell are called slugs ; those with external shells are called snails. In slugs, between the muscular floor of the mantle and the outer skin, there is a shell more or less developed. In the black slug, *Arion ater*, it consists of a few granules. The shell of *Arion hortensis* is a little more perfect, the granules being adherent, and measures from 1-50th to 1-32nd of an inch in its longest diameter. The shell is over the heart and forms a protective covering to that organ.

Circulation.—The heart occupies a position in the posterior part of the lung substance, immediately under the rudimentary shell ; it is about 1-12th of an inch in its longest diameter ; is enclosed in the pericardium ; the whole, as well as the lung, is covered by the pleura. The heart is a muscular sac divided into two cavities—an auricle and ventricle. It has a rhythmical action, beating about 40 times in a minute, and may sometimes be seen pulsating externally a little to the left of the centre of the mantle. The heart of a frog or fish if removed at once after death from the body will continue to beat for some time. This power of rhythmic contraction is sustained by small nerve centres in the substance of the heart, which are called ganglia. If those ganglia be destroyed, rhythmic movements cease. I do not know whether the heart of a slug will continue to beat for any time after removal from its natural surroundings ; but I have seen the heart of a slug beat for an hour after the animal had been cut up and all the viscera

removed, the skin being pinned to the table, the heart, with pericardium, lung, and pleura remaining *in situ*. The blood enters the auricle by the pulmonary vein, passes from the auricle to the ventricle, is pumped into the aorta (which arises from the base of the ventricle), and divides into an anterior and posterior aorta. The anterior branch passes the generative organs under the intestine and on to the brain or large nerve centre, as the carotid artery, on its way giving off a branch to the generative organs, and other branches to the foot crop, buccal mass, head, &c. The posterior branch supplies the liver, stomach, intestine, and the posterior part of the generative organs. The blood is returned to the lung by *venous sinuses*, when after passing through the lung is returned to the heart by the pulmonary vein.

Liver.—The liver, or digestive gland, is large in proportion to the other viscera. It is a brownish yellow colour, and divided into two principal lobes. I believe the secretion from each lobe is conveyed to the intestine by separate ducts. It fills the cavities between the lobes of the ovo-sac and the stomach. The hermaphrodite gland, or ovo-testis, is embedded in its substance.

Digestive System.—The mouth, when closed, has a puckered or drawn-in appearance. It is furnished with a ribbed, horny, crescent-shaped superior maxilla, with a posterior projecting plate, which forms the hard palate, and to which the muscles are attached which move it. The mouth opens into the buccal mass or pharynx, which is a rounded muscular lump. From the lower and posterior surface of its cavity a pale diverticulum depends. This is the sac of the lingual ribbon or tongue. Although sometimes called by the latter name, it has no likeness to that on which our ordinary ideas of such an organ are founded, for instead of being a projecting body lying in the cavity of the mouth, it is to some extent a sac, which passes backwards and downwards, the open end opening obliquely upon the floor of the mouth. When this sac is dissected, laid open, and examined, it is found to be covered with small teeth, which have a superior and inferior process on those near the centre line of the ribbon. The inferior process gradually lessens from the centre to the side, and in the side teeth it is wanting. There are 112 rows, each row having 26 teeth on each side of the middle line, and is expressed: $26 + 26 \times 112 = 5824$ teeth, each measuring 1-500th of an inch in length. Below, and overlapped by the open end of the ribbon, is a tooth-like cartilage, hinged, and resembling to some extent the epiglottis. I have had some difficulty in

understanding the physiology of this curious mouth. I think that the jaw is used to snip off portions from the edge of the leaf, and by the action of muscles on the cartilage under the ribbon it is drawn to the front of the mouth, turning the teathy sac inside out to rasp portions from the flat side of the leaf, or it may be used to rasp the leaf when held by the jaw. Behind the buccal mass there is a short œsophagus, through which the food passes to the crop, which is used as a store. It then enters the stomach, when after digestion and mixing with the secretion from the liver, it passes on to the bowel and the vent, which opens externally by the side of the respiratory orifice. When examining the contents of the bowel I found a great number of small intestinal worms, or entozoa.

Nervous System.—Surrounding the œsophagus is a collar of nerve tissue, which may be called the large nerve centre or brain of the animal. It is divided into two divisions—the *supra-œsophageal ganglia*; and the *sub-œsophageal ganglia*. Both are united by bands of nerve fibres. The supra-œsophageal ganglia (which in some measure corresponds to the cerebrum of the higher animals) give off the principal nerves to the head segment, eyes, &c., the first pair going to the inferior antennæ. We know that in the higher animals the first pair are the special nerves of the sense of smell, and if we reason here by analogy we will call the smaller antennæ the organs of smell. The second pair are the optic nerves. The third supplies the retractor muscles of the eye, a branch going to the retractor of the head. The sub-œsophageal ganglia are divided into two portions—an anterior and posterior portion, the anterior giving nerves to the muscular substance of the foot, &c. The posterior gives branches to the body wall, viscera, &c. The beautiful silvery appearance of the nerves radiating from the large nerve centre is very striking, and when once seen is never forgotten.

Generative Organs.—This slug, like many members of this order, is hermaphrodite, *i.e.* it is both male and female, but not self impregnating. The common orifice is under the fold of the mantle in front of the vent. The organs consist of *vagina*; *vaginal prostate*; *receptaculum seminis*; *albuminiparous gland*; *penis sac*; *vas deferens*; *hermaphrodite gland*, with its duct. The principal organ is the gland, which is situated in the left lobe of the liver. It consists of numerous follicles of a darkish colour, held together by connective tissue. The ova and spermatozoa are both formed in

this gland, a common duct leaves this gland and enters the albuminiparous gland near its base, when after receiving the duct of that gland leaves it to form the common generative canal. This canal is composed of the *vas deferens* and *oviduct* united together. The *vas deferens* branches off at the neck of the oviduct, and gradually widens as it enters the penis sac. The seminal receptacle is a pear shaped body connected to the vestibule by a short neck.

It is to be regretted that the diagrams with which I illustrated this paper cannot be reproduced here, as by their aid the various parts described can be much more easily understood.

12th to 16th of November, 1889.

EXHIBITION.

(Description from Standard).

The immediate occasion of this effort on the part of the Society was the reception of the minerals bequeathed to the town by the late Mr W. Baxter, of Glasgow, which have been placed under its care. The minerals have been arranged in cases in the upper room, under the charge of Mr Davidson, Summerhill. There has been brought together also an interesting loan collection of local antiquities, and of Burns and Stuart relics and autograph letters; and the room downstairs has been converted into a local portrait gallery, in which the works—chiefly engravings, with an admixture of crayons, pencil sketches, photographs, and silhouettes—number about two hundred.

A portrait of Mr Baxter, executed in crayon by his relative, Mr J. R. Ferguson, Dumfries, overlooks his mineral collection. The silver gun of the incorporated trades adorns the gable; and below it is a wooden panel, with a figure of the donor, King James VI., carved upon it, and a Latin inscription, in which the divine right of kings is asserted, this being the property of Mr Davidson. Mr Wilson, solicitor, Sanquhar, sends a choice collection of stone and bronze celts; and contributions to the illustration of the same ages are made by Mr James Lennox; Mr J. H. Rutherford, Ash Bank, Parkgate (who sends a very fine bronze celt found in Tinwald); and Mr J. Corrie, Moniaive (bronze pot). The Burns relics include the miniature of "Clarinda," for which she sat at the poet's request, and which was discovered less than a year ago by Mr Barbour, architect; various books annotated in Burns's hand-

writing, the original MS. of the song, "Gae fetch to me," his masonic apron, &c., the property of Mr James Lennox; a drinking horn and early edition of his works presented by Mrs Burns to the grandmother of the present owner, Mr J. J. Glover, Hazelwood; the books being autograph lines and inscription by Burns, which are in possession of the Mechanics' Institute; a gold brooch, with miniature of Robert Burns, eldest son of the poet, and hair of the three sons, lent by his grand-daughter, Mrs Brown, Dumfries; letters of "Lovely Polly Stewart," her father's will, &c., belonging to Mr Barbour. Captain Cutlar Fergusson of Craighdarroch has not only sent "the whistle" which his ancestor carried off in the contest immortalised by Burns, but has also allowed the will of Annie Laurie, the beautiful heroine of "Maxwelltown Braes," to be exhibited, we believe for the first time. We give below the text of this quaint and interesting document:

I, Anna Laurie, spouse to Alexr. Fergusson of Craighdarroch, Forasmuch as I considering it a dewtie upon everie persone, whyle they are in health and sound judgment so to settle yr. worldly affairs that yrby all animosities betwixt friend and relatives may obviat, and also for the singular love and respect I have for the said Alex. Fergusson, in caise he survive me I do heirby make my letter will as follows: First, I recommend my soule to God, hoping by the meritorious righteousness of Jesus Christ to be saved; secondly, I recommend my body to be decently and orderly interred; and in the third place nominate and appoynt the sd. Alexr. Fergusson to be my sole and only executor, Legator, and universall intromettor with my hail goods, gear, debts, and souns of money that shall pertain and belong to me the tyme off my decease or shall be dew to me by bill, bond, or oyrway; with powr to him to obtain himself confirmed and decreed exr. to me and to do everie thing for fixing and establishing the right off my spouse in his person as law requires; in witness whereoff thir putts. ([written?] be John Wilsone off Chapell, wryter in Drumfrise) are subd. by me at Craighdarroch the twenty eight day of Apryle, Jajvij and eleven [1711] years, befor the witnesses the sd. John Wilsone and John Nicholsonsone his servitor.

ANN LAURIE.

JO. WILSONE, witness.

JOHN HOAT, witness.

Mr Maxwell Witham of Kirkconnel enriches the collection with the valuable memorials of the Stuart period from Kirkconnel, and there are a number of deeds and documents connected with another important local family, the Griersons of Lag, referring particularly to Sir Robert of the persecution era. The parapher-

nalìa of the Incorporated Trades is well represented ; an Andrea Ferrara sword, with beautifully fluted blade (the property of Mr J. J. Glover), arrests attention in a small collection of weapons ; Mrs Gilchrist lends, among other things, an exact copy of the Lorne brooch ; Miss Richardson, Shakespeare Street, an impression of the original burgh seal. But want of space forbids that we should dwell at present on these or other exhibits. The autograph letters, however, call for mention. There are two of Carlyle's. One, the property of Mr Watson, Castlebank, was written to a friend in Dumfries during the cholera visitation. The other is in the possession of Mr J. C. McNaught, Queen's Place, and is in these terms :

Craigputtock, 11th March, 1834.

Dear Sir,—Here are two boxes of old books, which still do not exhaust my stock : if you can change them for me into money, they will be much more easily carried in that latter shape.

Most of them are of very small value, and I have left you to dispose of these according to your own judgment and opportunity : a few I have marked as more notable, or hypothetically worth a Price, which is in general some *thirty per cent.* less than I bought them at in the same second-hand condition. You must do the best you can : I shall see you again in a week or two.

An Invoice is inclosed, which (tho' wrong ordered in the copying) will, if you attend to my *marginal directions*, give you the books somewhat in their actual order and position from top to bottom of the boxes. I keep the original of it here.

The little Box is not my own : as there are but a small number of books in it, perhaps you could get it emptied, and returned to-morrow by the same cart. But at anyrate there will be other opportunities. Only do not use that Box, for it suits a special purpose here.

I remain (in great haste) yours truly,

T. CARLYLE.

Mr M'Kie, Bookseller,
—, Dumfries,
with two Boxes of Books.

Mr McNaught also shews two brief letters of Sir Walter Scott. Two of Allan Cunningham's are contributed by Mrs Gilchrist, Linwood.

Belgrave Place, 15th April, 1835.

Dear Miss Gordon,—I enclose two letters, one to Archdeacon Strachan, and another to the Hon. R. Jamesone, his Majesty's Attorney-General. I have written a third to Mr Dunlop, secretary to the Canada Company ; but it would make more than Lord Dudley Stuart's frank can carry ; it will therefore go to-day with some letters from my brother

by the route you direct. You will see that I have thus introduced you to a good divine, a sound lawyer, and thirdly, to one who has much in his power in the disposal of land. My wife joins me in love to your mamma and yourself. I wish you all success, and bid God bless you and yours.—I remain, very sincerely,

ALLAN CUNNINGHAM.

Miss Gordon.

27 Belgrave Place, London,
16th April, 1835.

My Dear Friend,—I am about to tax the kindness of your nature. A young lady, Miss Gordon, my wife's dear friend and mine, goes with her brother to your land of Promise, with the hope of finding a sheltered nook and a comfortable home. She is amiable and highly respectable, and if you will be so good as befriend her it will be her safeguard among strangers, for your heart is not only warm, but the strength of the law is with you. I have introduced her to Archdeacon Strachan, and given her a note to Mr Dunlop, of the Canada Company.

Some literary reputations have risen and others have remained stationary since I had the pleasure of seeing you here. Of the former, one is near and dear to yourself; the fine true feeling and exquisite perception of beauty in her works have made them general favourites. I dare not say that I have risen, but if my books be not good they are read. [Songs?]. The Lives of the Painters and the Life and Works of Burns have sold very well, though these merciless curs the critics snarled a little. I am afraid they will have more cause to snarl at my next work, the Lives of the British Poets. Do, my dear friend, write me a word of encouragement about this undertaking. I have some misgivings. My wife unites with me in love to you.—I remain, my dear friend, yours ever and ever,

ALLAN CUNNINGHAM.

The Hon. Robt. Jamesone,
Attorney-General, &c., &c., &c.

An old placard prominently displayed (and which is in possession of Mr M'Naught, Queen's Place) recalls the story of the abortive duel and the law suit. In the placard, which is dated 1822, Mr Vair, wine merchant, Leith, denounces Mr David Armstrong, writer, Dumfries (afterwards Provost of the burgh), who was his rival for the hand of Miss Grieve, as "a rascal, a liar, and a coward."

The portrait gallery is enriched with some early sketches by Thorburn. A picture which is attracting considerable attention is a spirited caricature of Provost Fraser, at one time proprietor of the King's Arms Hotel, Dumfries, in which the Provost is represented in the form of an ass carrying his own black servant. The

history of this picture is as amusing as the sketch itself. In 1849 a gentleman named Frith was in the habit of caricaturing any Dumfriesian of note whom he might observe on the street, these portraits being usually hung on his shop window. Among others caricatured was Provost Fraser, who, being very indignant at being dealt with in such a manner, threatened summary vengeance with fire-arms, the result being that on the following morning the sketch now on exhibition in the Society's rooms appeared on Frith's window.

The local portrait gallery has been a source of much attraction to visitors. Mr Barbour, with whom this idea originated, and on whom the chief work of forming the collection devolved, has reason to be gratified with the success which has attended his effort. In the place of honour over the mantelpiece, the Earl of Mansfield, the eminent forensic lawyer and Lord Chief Justice, fittingly symbolises the majesty of the law; and grouped in the same neighbourhood are representatives of some leading local houses, among them the late Duke of Buccleuch—of whom there is also a charming engraving as a child in a family group—the late Marquis of Queensberry, “the Union Duke,” a caricature sketch of “Old Q”; William, fifth Earl of Nithsdale, and his Countess, the Lady Winifred Herbert, who so cleverly managed his escape from the Tower of London. “The Admirable Crichton” typifies in his own person all learning and accomplishments; and in Charles Kirkpatrick Sharpe we have a modern representative of versatile genius. The most striking symbols of the county's connection with art are Thorburn's early sketches and miniature portraits of the late Mark Johnstone of Stonehousecroft, Maxwelltown (the father of Mrs Symons); of the late Mr James Bogie, nurseryman (one of the party who undertook the duty of removing the mortal remains of Burns to the Mausoleum); and of the late Mr Rae, farmer in Gateslack. There is also a portrait of the late Mr Dunbar, the sculptor of the sleeping child in St. Michael's Church. The walls bear eloquent testimony to the skill of a Dumfries artist, Mr J. R. Fergusson, with the crayon, a department in which he has acquired a just celebrity. Besides his portrait of the late Dr Grierson there are hung large crayons by him of Carlyle and of the late Mr M'Dowall, both excellent likenesses. And of his facility in the use of oils a small painting of the late Mr John Jackson, solicitor, affords a very favourable example. Near to that of Dr Grierson are hung portraits of the late Sir William

Jardine of Applegarth, first president of the Dumfries and Galloway Natural History and Antiquarian Society, and of the late Dr Gilchrist, a more recent occupant of the office. There is also a portrait of the late Mr Starke of Troqueer Holm, the immediate successor of Sir William. The commanding figure in the local world of letters as here represented is of course that of Burns. Of the poet himself there are nearly a dozen engravings. Two of these (the property of Mr Maxwell, bookseller, and of Mr Gibson Starke of Troqueer Holm) bear inscriptions in the handwriting of the poet's sons. Grouped around the central figure are portraits of members of his family and literary friends; among the latter being Dr Currie, his first biographer; the Rev. Dr Blacklock, a native of Annan, and the blind poet-minister of Kirkcudbright; Mr Syme of Ryedale; the Earl of Glencairn; and an engraving of Mr Martin Hardie's striking portrait group, "Burns in Edinburgh." A photograph is also shewn of Miss M'Murdo, "Phyllis the Fair" of his song. In "the poet's corner" we find further three portraits of Allan Cunningham, one of them being a sketch which was in the collection of the late Sir James Gibson Craig; Henry Scott Riddell, a native of Ewesdale, and author of "Scotland Yet;" Thomas Aird, the friend of Ayton; and James Hogg, who was successively a shepherd and a farmer in Dumfriesshire before settling at Altrive. General Sir Robert Laurie, who represented Dumfriesshire in Parliament from 1774 until his death in 1804, and one of the three who took part in "the Whistle" contest at Friars' Carse, is also entitled to be ranked among the friends of Burns. Near his portrait is that of a descendant of his successful rival on that occasion, Mr Cutlar Fergusson of Craigdarroch, M.P. for the Stewartry, and a member of Earl Grey's Reform Ministry. The Senate has other representatives in the persons of the late Mr J. J. Hope-Johnstone, M.P. for Dumfriesshire; Mr Ewart, M.P. for the Dumfries Burghs; and Mr R. Milligan, brother of the late Mr Milligan of Westpark, who sat for Bradford in the Parliaments of 1847 and 1852. In Sir Thomas Kirkpatrick of Closeburn, Sheriff of Dumfriesshire, and Mr Andrew Crosbie, advocate, son of a Provost of Dumfries, and the "Pleydell" of Scott's "Guy Mannering," we have additional pillars of the law. Divinity is strongly represented. Perhaps the most attractive portrait in this series is a remarkably fine engraving of Edward Irving. There is a complete set of the ministers of the New Church of Dumfries, several of them gentlemen of distinction; and among others we

note the late Dr Wood, Dumfries ; Dr Dunbar, Applegarth ; Dr Robert Gordon, "the sweet preacher," a native of Glencairn ; Dr Wightman, of Kirkmahoe ; Dr M'Vicar, of Moffat ; Mr Gatt, of Graitney ; and a medallion of Dr Scott, of St. Michael's. Besides Mr Fergusson's crayon of Carlyle, there are a beautiful interior view of Chelsea house, with Mr and Mrs Carlyle at home, and an engraving of the Maclise portrait. Of Hugh Clapperton, the African traveller, a portrait is lent by his cousin, Miss Clapperton, Annan. Sir John Ross, the Arctic explorer, is also represented ; and there are portraits of Paterson, the founder of the Bank of England, and Telford, the engineer. Many faces of leading citizens of a past generation are figured on the walls. The silhouettes by Firth of prominent Dumfriesians of forty years ago we have already noticed. Besides the caricature of Provost Fraser there are characteristic portraits of Dean Hamilton, Mr Irving of Gribton, and Mr Sinclair, bookseller. A few portraits are also introduced of notables who were more slightly connected with the district ; among them being Queen Mary, Prince Charlie, "the great Marquis" of Montrose, who captured Dumfries for the Royalists in 1644, a transaction of which a contemporary printed account is exhibited upstairs ; Claverhouse, "the gallant Graham" of the Cavaliers, the heartless persecutor of the Scottish peasantry. A collection of Wedgwood cameos, from Flaxman's designs, illustrate another form of art.

Among the exhibits in the antiquarian section, in addition to those already noticed, we may mention the immense punch bowl of the Incorporated Trades, lent by Mrs D. Dunbar, Langlands ; the ram's horn snuff mull presented to them by the late Captain M'Dowall, now the property of Mrs Sloan of Elmbank ; the minute book of the seven incorporations, extending back to 1612, lent by Mr Primrose of Primrosehill ; that of the Glovers, belonging to Mr James Lennox ; a burgess ticket of 1773, in favour of an ancestor of his own, lent by Mr J. J. Glover, Hazlewood ; a book by the late Henry D. Thoreau, bearing the author's autograph, and also that of Carlyle, who presented it to Aird, the property of Mr Cumming, Albany. In the same case with this book and the Carlyle and Cunningham letters are a silhouette of Lieutenant Allan, of the Canadian Queen's Rangers, and an edition of "The Gentle Shepherd" edited by him, lent by Mr Allan, chemist, Dumfries. Mr Henry Gordon exhibits the MS. of Train's history of the Buchanites, with annotations and criticisms in the

hand of Andrew Innes, the last survivor of the sect; and Mr J. J. Glover, one of the spinning wheels made by them during their stay in Galloway. A cutlass which belonged to Paul Jones is exhibited by Mr W. A. Dinwiddie; Mr Lennox has two pistols that were also his property; and Mr J. Corrie, Moniaive, an imperfect pistol believed on good evidence to have belonged to James Renwick, the martyr. The "jougs" from Moniaive Cross are also on view, and beside them is hung the iron belt, with handcuffs attached, which was made for the security of Haggart, the murderer and prison breaker.

Among the few natural history objects which have been added for the occasion to the Society's collection may be mentioned a white hare, of unusual size and very pure in colour, which was shot on South Cowshaw, Tinwald, more than a dozen years ago.

Interesting explanations of the use of electric and galvanic apparatus were given by Messrs John Rutherford (late secretary) and John Neilson, M.A.

5th of December, 1889.

Mr JAMES G. H. STARKE, M.A., in the Chair.

New Members.—Mr John Primrose, solicitor, and Mrs John Craig, of Rotchell Park.

Donations.—Mr David Sharp, F.R.S., presented his work on Insecta; the Journal of the Elisha Mitchell Scientific Society of North Carolina; Transactions of the Stirling Natural History and Archæological Society; Report of the British Association meeting at Newcastle.

The Chairman congratulated the Society on the success of the recent Exhibition, and intimated that the Council had requested Mr James Barbour to endeavour to make a beginning of a collection of portraits of local celebrities to be permanently placed in the Society's rooms.

COMMUNICATIONS.

I. *Additional Notes on the Flora of Wigtownshire, with Notes on Moffat, Dumfriesshire, and Kirkcudbrightshire Plants.*

By Mr JAMES M'ANDREW.

As our Natural History and Antiquarian Society should be interested in the Flora of Wigtownshire with a view of eventually

making as complete a list of the plants of West Galloway as possible, I need no apology for again laying before you some additional information on the Flora of our neighbouring county. Though much yet requires to be done towards the compilation of a full list of Wigtownshire plants, yet I am happy to say that material for this purpose is yearly accumulating; and if the information at present available for this purpose were utilised and catalogued, it would present a very respectable Flora of Wigtownshire.

During last July and August (1889) I spent a few weeks at the Isle of Whithorn and Garliestown—places in Wigtownshire I had not formerly visited. I botanised almost the whole seaboard from Burrowhead to Orchardton Bay, besides extending my walks several miles inland. The Isle of Whithorn affords to visitors quietness and bracing sea air; while Garliestown, from its situation at the head of its bay, and from the wooded nature of its vicinity, does not possess such bracing air, though it has numerous compensating advantages. Many of the fields in the south of the Machars have “scraggy knowes” where the common wild plants luxuriate undisturbed. In the hollows between these ridges are many small lochs containing aquatic plants, almost each loch having its own distinctive vegetation. The Flora of the south of the Machars is entirely lowland.

The following plants are new records for Wigtownshire :

1. *Thlaspi Arvense*—In abundance in some fields between the Isle of Whithorn and the Gamekeeper's Cottage.
2. *Allium Vineale*—In plenty all along the heughs between Craggleton Castle and Port Allan.
3. *Ranunculus Sceleratus* and 4, *Valerianella Olitoria*—Both rare, at Port Yerrick.
5. *Medicago Lupulina*—In abundance on the roadsides, in fields, and in waste places all along the shore from Orchardton Bay southwards.
6. *Astragalus Hypoglottis*—About Burrowhead, and in greater plenty and in fruit on the grassy heughs east of the Isle.
7. *Convolvulus Arvensis*—On the roadsides south of Whithorn and at Garliestown.
8. *Æthusa Cynapium*—Among corn on Drummorral Farm; rare.
9. *Euphorbia Exigua*—On the Isle Farm; rare.
10. *Sanguisorba Officinalis*—North of Eggerness Point; not common.
11. *Calamintha Clinopodium*—In several large patches north side of Garliestown Bay.
12. *Thalictrum Flavum*; 13. *Arenaria Serpyllifolia*, var. *heptocladus*;
14. *Atriplex Littoralis*, var. *marina*—all in the same locality—Garlies-

town Bay. This *Atriplex* occurs in great profusion south of Garliestown.

15. *Lepidium ruderales*—Among corn on Penkill farm.

16. *Carex intermedia*—In several marshy places round the Isle.

17. *Carex paniculata*—Very luxuriant in High Arrow Loch, and in a loch north of Cutreoch farm, &c.

18. *Carex teretiuscula*—Prestric Loch, &c.

19. *Carex flava*, var. *cyperoides* (Maison)—Garliestown Curling Pond.

20. *Chara polyacantha*—This is an interesting find. Mr Coles found it in 1883 on Culdoch Moor, Kelton, Kirkcudbrightshire. It has been found elsewhere in Scotland only in Fife and Roxburgh. I found it in two lochs near the Isle of Whithorn—in the loch north of Cutreoch farm, and in a loch immediately north of Burrowhead. Where the water is comparatively shallow, this chara almost entirely covers the bottom, and a characteristic of the plant is the way in which it spreads out its branches into the deeper water, “seeking rest and finding none.”

In addition to the above twenty new records, I may name a few of the rarer and more characteristic plants of the district. Garliestown Bay proved the most fruitful in the variety and luxuriance of its vegetation. Here such sea shore plants as *Samolus valerandi*, *Carex vulpina*, *Cenanthe Lachenalii*, &c., attain a great size. Port Yerrick Bay stands second in productiveness. At the south end of it I found a large patch of *Artemisia maritima*. *Carduus crispus* is common, and *Sium angustifolium* grows in lochs and ditches to the west of the Isle. South of Garliestown, along with *Atriplex littoralis*, var. *marina*, grows *Suaeda maritima* in great profusion. About the Isle I gathered *Scrophularia aquatica* in abundance in Drummullin Burn, running into the milldam, in which *Chara vulgaris* and *Potamogeton crispus* were found. *Crithmum maritimum* grows on the rocks about Burrowhead and east of the Isle. *Ononis spinosa*, *Helianthemum vulgare*, *Genista tinctoria*, *Ulex gallii* are frequent. *Juncus obtusiflorus* and *Juncus maritimus* are found in several places along the shore; *Spergularia rupestris* near the Isle Cairn; *Statice limonium*, var. *bahusiensis*, from Orchardton Bay to Garliestown; and *Epilobium hirsutum* frequent about Garliestown. In Eggerness Wood are found *Circœa lutetiana*, *Solidago virga-aurea*, *Mercurialis perennis*, *Hippophae rhamnoides*, *Scirpus lacustris*, in Palmallet Pond; and *Typha latifolia* in Prestric Loch. *Scolopendrium vulgare* grows in plenty by the sides of two ditches—one from Penkill Farm to Garliestown Bay, another from Palmallet Pond to the shore. *Asplenium adiantum nigrum* grows on dykes between Garliestown and

Millisle and about Eggerness Point. There is nothing new to be remarked about the cryptogamic flora of Wigtownshire.

The Rev. James Gorrie, F.C. Manse, Sorbie, who is well acquainted with the botany of his own and neighbouring parishes, sends me a list of a few plants, among which are other two new records for the county—1, *Adoxa moschatellina*, near Sorbie village; and 2, *Viburnum opulus*, at Waulkmill.

Also, in September last Mr Charles Bailey, of Manchester, botanised in Kirkeudbrightshire and Wigtownshire, chiefly among the Rosæ and the Rubi, but the result of his work has not yet been published.

Mr John T. Johnstone, secretary to the Moffat Field Club, has sent me a list of Moffat plants gathered by himself, as new records for Dumfriesshire. These are: *Sagina procumbens*, var. *spinosa*—near the Beef Tub; *Hieracium auratum*—Moffat Water; *H. Sparsifolium*—Craigmichen Scaurs; *Ajuga pyramidalis*—Black's Hope; *Saxifraga nivalis*—Black's Hope. The Rev. E. F. Linton, of Bournemouth, visited the Grey Mare's Tail during the past summer, principally in search of *Hieracia*, but he has not yet published a list of his gatherings in that locality.

The following plants have been recently confirmed from the Moffat district, chiefly by Mr Johnstone himself: *Thalictrum minus*, *Silene maritima*, *Cerastium alpinum*, *Saxifraga oppositifolia*, *Sedum rhodiola*, *Calamintha clinopodium*, *Saussurea alpina*, *Hieracium saxifragum*, *Hieracium pallidum*, *Hieracium prenanthoides*, *Crepis succisefolia*, *Oxyria reniformis*, *Salix herbacea*, *Habenaria viridis*, *Veronica montana*, *Festuca ovina*, var. *rubra*, *Woodsia ilvensis* (from Corrieferan), *Cystopteris fragilis*, *Aspidium lonchitis*, *Nephrodium dilatatum*, with its vars. *dumetorum*, *collina*, *tanacetifolia*, *robusta*, *grandidens*, *micromera*, and *valida*. These last were gathered by Mr James Anderson, Moffat.

The following plants recorded from the Moffat district about 30 years ago, chiefly by the late Mr John Sadler and the Rev. W. Bennet, have not been recently confirmed, and await re-confirmation: *Lychnis viscaria*, *Alchmilla alpina*, *Saxifraga aizoides*, *Circæa alpina*, *Arctostaphylos uva-ursi*, *Pyrola secunda* (this has been found at Beld Craig since Mr Sadler's time by the late Professor Balfour's class), *Trientalis europæus*, *Tofieldia palustris*, *Juncus triglumis*, *Juncus castaneus*, *Juncus bifidus*, *Carex rupestris*, *Carex rigida*, *Carex capillaris*, and *Lycopodium annotinum*. I am afraid that the names of the majority of the above mentioned

plants ought now to be erased from the Flora of Dumfriesshire. However, after finding *Saxifraga nivalis* in the Moffat district it is to be hoped that Mr Johnstone's diligence may yet be rewarded by a re-confirmation of several of the above plants.

Mr Charles Scott, late of Terregles Gardens, and now at Netherby Gardens, Longtown, has sent me lists of mosses and Hepaticæ gathered at Penton Linns, on the borders of Dumfriesshire; as also a list of some flowering plants, but with the exception of *Neottia nidus-avis*, and *Epipactis latifolia*, they are all common.

The only plants I have to record as new from Kirkcudbrightshire are (1) *Hieracium sparsifolium*, gathered by Mr Coles at Halfmark, Carsphairn, in July, 1884; and (2) *Hieracium holosericeum*, gathered by myself several years ago on Milldown, Kells Range. Mr Coles also records this year a new station for *Osmunda regalis* near Gatehouse.

II. *Notes on the Diamond Mines and Gold Fields of South Africa.*

By Mr GEORGE F. SCOTT ELLIOT, M.A.

The Central Mine at Kimberley is one of the most astonishing monuments of human industry in the world. It is an enormous excavation, large enough to contain the whole of Trafalgar Square and deeper than the Nelson Column. Moreover, this gigantic pit is not by any means the whole of the mine. The workings are now carried on wholly underground and extend to a depth of 800 feet. They consist of narrow tunnels, up and down which Kaffirs, in very simple clothing, are perpetually shoving trucks.

The diamondiferous blue earth is first exposed to the rain and sun for some months. This exposure disintegrates it, and being subsequently washed, the diamonds are easily picked out.

The De Beer's Mine is almost as large as the Central. It lies to the south-east of the Central, and is an irregular ellipse some 1020 feet long by 480 feet broad.

Du Toit's Pan Mine lies to the south-west of De Beer's and is also elliptical in shape, with a strong projection inwards at one point. Its long axis lies E.N.E. and W.S.W., and it is about 2000 feet long and 1000 feet across.

Bultfontein is much smaller and circular in shape and lies a little to the south-west of Du Toit's Pan. Diamonds are also found in small quantities at other points near Kimberley, viz. : Olto's & Taylor's Kopje, Yager's fontein, &c. Diamonds are also

found in considerable quantities in a coarse conglomerate on the banks of the Vaal River. The stones in this conglomerate are all water-worn and about the size of a hen's egg. They appear to begin suddenly at Warrenton and Sixteen streams, and are found along its course for a considerable distance. Probably the river has cut into some mine similar to those at Kimberley, and the diamonds have been washed out of it. It is worth noting that at Warrenton this conglomerate is 60 or even 100 feet above the present bed of the river.

A very remarkable point about the occurrence of these mines consists in their being distributed along a narrow belt of country. This runs N.N.E. by S.S.W., and is about 80 miles long and 2 or 3 miles broad. Such a distribution may perhaps point to a line of weakness, along which volcanic craters were formed. It is now generally admitted that the diamond mines are simply volcanic necks or pipes, and they appear to occur, so far as I could judge, about the epoch of the Kimberley shales.

The following sections shew the rocks encountered in the shafts where records were kept :

	<i>Kimberley Central.</i>	<i>De Beer's, No. 1.</i>	<i>De Beer's No. 2.</i>
Débris ...	... A few feet.	A few feet.	—
Red Sand ...	... 3 ,,	3 ,,	3 feet.
Dolerite ...	... 40-50 ,,	95 ,,	63 ,,
Black and other Shales ...	240-250 ,,	195 ,,	225 ,,
Amygdaloidal ...	626 ,,	?	395 ,,
Ancient ...	...Diabase of Dunn.	?	Not bottomed.

The sections of De Beer's are peculiarly interesting, as they shew that the dolerite thins out as one proceeds away from the mine. This is also shewn, though not so well, at the Central Mine, as the bed of dolerite there is 6 feet thicker as exposed at the edge of the mine than it is where encountered by the shaft at some little distance from the edge. This thinning out of the dolerite, and especially its upward course from the mine, as well as the fact that it did not extend over the blue ground, tend to prove that it proceeded from the openings now filled by diamondiferous earth. The black shale below is also hardened (as one would expect), though I could not see the junction to tell if there was a special hardening there. I may mention here that the edges of the black shale are in the Central and Du Toit's Pan inclined upwards at an angle of some 45°. This is clearly shewn also at

the small mine, St. Augustine's, near the Central. Though this may be the result of a lateral thrust, it seems more simply explained as the result of volcanic action. Hence if we suppose the above reasoning correct, the period of formation of the craters is fixed as the epoch of the deposition of the Kimberley shales by the occurrence of this dolerite contemporaneously with the shales.

The next point of interest is to know whether the diamondiferous blue earth occurs really *in situ* or has been washed in from above. I am strongly inclined to the latter view, and for the following reasons :

1. The blue earth has no distinctively igneous appearance whatever.

2. Though in the case of St. Augustine's Mine the part of the blue near the edge of the pit is hardened, there is generally no sign of the blue having been ejected from below, and it certainly does not alter the rocks with which it is in contact. Usually speaking, those parts of the blue earth which are in contact with the surrounding strata are marked by a soft jumbled or "soapy" condition.

3. Mr G. R. Lee, of Kimberley, shewed me a piece of lignite found in the blue earth, and he also told me that he had found limestone shells apparently unaltered in the blue earth.

It appears therefore very probable that the blue earth has simply been brought in from above. There are even many reasons which tend to shew that the whole of the craters were subaqueous. The Kimberley shales have all the appearance of a deposit formed in deep and quiet water. One must also remember that they form the starting point of the fresh water beds of the Caroo formation and the Stormberg Beds (sandstones and coalmeasures), all of which are distinguished by a remarkable horizontality of the strata, and which attain a thickness of 2000 feet on an average. A glance at the map of South Africa shews a gigantic mountain chain within 80-120 miles of the coast and rising to an average height of 7000 feet above the sea. This range (the Drakensberg) includes such mountains as the Font aux'Sourees, 10,000 feet; the Giant's Castle, 9657 feet; and Cathkin Peak, 10,357 feet. Now Kimberley is only 4200 feet above the sea. The basin of the Vaal River in fact is bounded by the Drakensberg, then by a continuous series of mountain ranges, under different names (Stormbergen, Bamboesbergen, Kikvorschbergen, Nieuwveld, Roggeveld, Guaap, &c.), which run all round the southern corner of the continent at

from 80 to 170 miles from the sea. We have no reason to suppose that the deep and narrow gorges through which the Orange River now makes its way out of these mountains to the west always existed; but we have every reason to think that these mountains were at one time much higher than they now are. If, in fact, one tries to realise this semicircular rim of mountains with the whole drainage of the Orange River enclosed as a gigantic lake within it, one will, I think, be able to explain the deposition of the Kimberley shales, Caroo and Stormberg Beds, which have a so remarkably regular and uniform appearance. The strata are perfectly horizontal now through most of their course, and the Caroo Beds, as well as at any rate the coal beds of the Stormberg, are fresh-water deposits.

It follows from this that Kimberley must have been during part of this period at the bottom of a vast inland lake, and if I am right in placing the formation of the craters as closely succeeding, if not during the deposition of, the Kimberley shales, the volcanoes must have been subaqueous. The craters would therefore, after the lava had been ejected, become gradually filled up by mud (possibly tuffaceous) containing organic remains. There is no reason, however, to suppose that volcanic action ceased altogether. It is possible that volcanic gases or steam continued to pass up through this porous mass of finely divided sediment.

Perhaps the peculiar veins found in the diamondiferous blue earth show that this really was the case. In St. Augustine's mines, as already stated, there is a band of hardened blue running round the edge of the mine. In De Beer's there is what is called "the Snake," which runs right across the mine from S.E.-N.W., and of a peculiar structure. In Du Toit's Pan there is an isolated laminated mass of rock of a peculiar kind (called Mount Ararat) in the centre of the blue earth, with three veins of hardened blue earth running across the mine from it to the sides. In the central mine there is a vertical narrow fissure, filled apparently by very hard blue earth, which appears to traverse the surrounding rocks in the direction of De Beer's mine.

I have not yet received a description of the petrological character of these veins, and therefore cannot say more than that it seems to be probable that they are due to the action of volcanic gases at a great heat and pressure penetrating the porous blue earth along certain lines or crevices. Moreover, such an action of volcanic gases would perhaps explain the formation of diamonds

from the organic remains in the sediment quite as well as anything that our present ignorance of the subject could suggest.

Goldfields.—It is almost impossible to exaggerate the richness of the Transvaal so far as precious metals are concerned. Gold occurs almost throughout its whole extent. Coal is found also over a very large area, while ironstone is common. Silver and copper, lead and cobalt also exist at different places in payable quantities.

Gold occurs in three distinct forms.

1. *As quartz or reef gold in veins amongst quartz rocks and very often in granitic rocks.*—Most of the Barberton mines consist of this kind of gold-bearing quartz rock, and the gold from the Waterberg Mountains, Swaziland, part of that from Bechuanaland and Matabeleland appears to be of this nature. This must of course be the original form in which it is found, and it is not surprising that apparently the whole district occupied by the oldest rocks in South Africa (viz., the North of the Transvaal, Matabeleland, and probably the whole country to the north as far as the Zambesi) contains gold. It appears to be invariable with primary rocks in this part of the world that they contain gold. Thus gold has been found in the Table Mountain granite, and also the granites and gneisses of Madagascar (probably of the same formation as those on the opposite African coast) contain gold.

2. *As alluvial or "placer" gold that is in large or small quantities in sand or gravel washed by water out of its original state.*—A noteworthy feature of the alluvial gold in South Africa is its occurrence at the Devil's Kantoor (*i.e.*, place of business), where it is found in sand almost on the summit of the highest mountain in the neighbourhood, showing that there has been an enormous amount of denudation in the surrounding district. It is also found at the Knysna between Cape Town and Port Elizabeth, apparently in connection with the granite of Table Mountain or some of the rocks which accompany it. I was, however, unable to visit either of these localities.

3. *In the "banket" of Witwater's Rand and Klerksdorp.*—This form appears to be peculiar to South Africa. The name is derived from a peculiarly horrible kind of sweetmeat something like almond rock which is much appreciated by the Dutch. It is in reality a coarse conglomerate consisting chiefly of quartz fragments, and containing gold in the matrix. I was only able to pay a very hurried visit, but the following notes may be of interest. At Klerksdorp the banket is found on both sides of a marked

anticline. Near the town it is found dipping west at an angle which appeared to be about 45° in the mine seen by me; on the Nooitgedacht property on the other hand, about 3 miles off, it is found dipping east at from 12° to 60° .

At Johannesburg I was, after much difficulty, able to visit the Weinmer and Ferreira properties. Here the accompanying rocks, chiefly schists, a very hard limestone, and sandstones, dip south at a very high angle, usually about 80° (though in places only 45°). In the properties I saw there were about 7 of these belts of conglomerate interbedded with sandstones and usually 2 or 3 feet thick; a thin belt of sandstone is interleaved with one of these belts of conglomerate. The few inches of sandstones in contact with the conglomerate are hardened slightly, and also contain gold. It is said that this conglomerate has been traced to Klerksdorp from Johannesburg, and it is also said that banket exists at Amsterdam considerably to the west, but I could not verify these statements.

From the manner in which it occurred with sandstones it can scarcely be doubtful that it is an ordinary water-formed conglomerate. (Mr Ballot of Rolfontein showed me a small shell embedded in banket which would of course prove this.) It has in all probability been formed along the shore of some great inland sea, and its position both in time and space are in favour of the existence of such an inland sea as that mentioned above. I found the strata to the North of Pretoria at the Macaliesberg Mountains again dipping north, which if I was right in recognising some of the Johannesburg rocks would prove that banket should exist somewhere near.

A series of sandstones and coalmeasures overlie the primitive auriferous rocks over a large area. Instead of being inclined at a high angle, they are horizontal or slightly folded. The coal is found and worked at Boksburg, twelve miles from Johannesburg. I again saw it worked at Middelburg, and further south at Errnelo. The whole country from Middelburg to Lake Chrissie and thence some distance to the south of Errnelo consisted of these sandstones and coalmeasures. The coal lies close to the surface, and the district being conveniently cut up into small valleys, one often finds the coal cropping out in the bed of the streams.

9th of January, 1890.

Mr ROBERT MURRAY in the Chair.

New Members.—Mr Samuel M'Kerrow, Boreland of Southwick, and Mr John Proudfoot, Ivy House, Moffat.

Donations.—A Paper on Recent Experiments on the Vision of Arthropods, by Mr David Sharp, F.R.S., and the Essex Naturalist for September, 1889.

COMMUNICATIONS.

I.—*Meteorological Notes in Dumfries for 1889.* By Rev. WILLIAM ANDSON.

Meteorological Observations taken at Newall Terrace, Dumfries, during the year 1889. Elevation above sea level 60 feet.

Months.	BAROMETER.				Self-Registering Thermometer in shade.				RAINFALL.				HYGROMETER.		Temperature of Dew-point.	Relative Humidity = 100.
	Highest in Month.	Lowest in Month.	Monthly Range.	Mean for Month.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean Maximum.	Mean Minimum.	Mean Temp. of Month.	Days on which it Fell.	Heaviest in 24 Hours.	Total Amount.	Mean Dry.			Mean Wet.
1889.																
Jan.	30.645	29.217	1.428	30.107	53.7	24.5	29.2	44.5	35.5	39.9	19	0.55	2.44	39.5	53.3	Deg. 36.8
Feb.	30.444	29.039	1.405	29.880	52.5	20.5	32	43.3	32.3	37.8	18	0.33	1.82	37	35.3	Deg. 32.9
Mar.	30.550	28.900	1.650	29.942	57.5	20.5	37	47.2	34.5	40.8	14	1.22	2.42	40.1	37.2	Deg. 33.6
April	30.113	29.150	0.963	29.736	60.0	31.7	28.9	50.6	38.1	44.3	16	0.51	2.32	43.8	41.2	Deg. 38.1
May	30.154	29.430	0.724	29.807	78.5	40	38.5	65.2	46.6	56	10	0.66	3.46	54.2	51	Deg. 47.9
June	30.521	29.720	0.801	30.071	82.4	37	45.4	70.9	48.7	59.8	8	1.22	1.88	59.2	54.9	Deg. 51.9
July	30.490	29.421	1.069	29.902	70	40.5	38.5	67.8	47.9	57.8	16	1.14	4.79	57.9	54.2	Deg. 50.9
Aug.	30.201	29.135	1.126	29.770	72.2	40.6	31.6	63.1	50.5	57.7	25	0.75	4.29	56.6	53.9	Deg. 51.4
Sept.	30.500	29.529	0.971	30.022	75.5	39.2	36.2	62.5	45.3	53.9	11	0.66	1.69	52.9	50.5	Deg. 49.3
Oct.	30.365	28.445	1.920	29.661	62	31	31	53	40.3	47	21	0.89	5.16	46.3	44.7	Deg. 42.8
Nov.	30.031	29.100	1.531	30.136	61.5	25.2	36.5	49.2	38.3	43.7	17	0.55	1.80	43.7	42.5	Deg. 41
Dec.	30.725	29.163	1.549	30.064	53	26.2	26.8	44.1	33.4	38.7	21	0.50	3.10	38.6	37.6	Deg. 36.2
Year	30.725	28.445	2.280	29.925	82.4	20.5	61.9	55.1	40.9	43.1	202	1.22	35.17	47.5	45.1	Deg. 42.4

Directions of the Wind during the Year.

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Var. or Calm.
23	91	79	58	42	210	74	118	29

Barometer.—The highest reading of the barometer occurred on the 5th December, on the evening of which day it stood at 30.725 inches—the highest reading for the last four years. The lowest reading was on the 7th October, when the mercury fell to 28.445 in. On that occasion a very deep depression moved from south-west to north-east, the centre of which passed over the north of Ireland and the extreme south of Scotland, and about 9 A.M. was very near Dumfries. A large amount of cirrus cloud in the afternoon of the previous day, with a backing wind and a falling barometer, gave premonition of the approach of a cyclonic disturbance; and the fact that at the hour mentioned, the wind, when the barometer was at the lowest, was comparatively moderate, though it had been very strong and squally during the night, was an evidence that the centre of the cyclone was then passing over this district. Between 9 P.M. on the 6th and 9 A.M. on the 7th, twelve hours, the fall in the barometer was 1.072 in. The range for the year was 2.280 in., and the mean pressure (reduced to 32 deg. and sea level) was 29.925 in.—very nearly the average of the three previous years. Low barometer readings, ranging from 28.9 in. to 29.2 in., occurred in January, February, March, April, August, November, and December, and were for the most part accompanied by storms of wind and rain, but the year has not been exceptional in this respect, and in no case has the mean pressure of any month fallen below 29.661 in., which happened in October, the month in which most rain fell. In January, June, September, November, and December the mean pressure exceeded 30 in., and in all these months the weather was of a favourable character.

Temperature.—The highest temperature of the year was recorded on the 22d June, when the maximum reading of the thermometer was 82.4 deg., as compared with 83.6 deg. on 26th June, 1888, and 87 deg. on 25th June, 1887. It is worthy of remark that the highest single day readings during the past three years have occurred in June, about or shortly after the summer solstice. The mean temperature of June last was also the highest of the year, viz., 59.8 deg., as compared with 57.8 deg. in July, and 57.7 deg. in August, though as a rule the highest mean temperatures usually occur in July. From the 14th June to the 6th July, there was very bright sunny weather, during which the maximum readings of the thermometer ranged from 64 deg. to 82.4 degs., and the minimum from 46 deg. to 54 deg., and no rain fell, and in all during the summer there were 46 days on which the maximum

readings exceeded 70 deg., in contrast with 14 days in 1888, and 40 days in 1887. The lowest temperature of the year was recorded on 10th February and 4th March, on both of which the minimum reading was 20·5 degs., as compared with 13·3 deg. in February, 1888, and 21 deg. in December, 1887. Annual range of temperature, 61·9 deg. The month of lowest mean temperature was February, with a record of 37·8 deg., and December came next with 38·7 deg., and January third with 39·9 deg. In 1888 the lowest mean temperature was also in February, and the next lowest in March. There were 55 nights on which the thermometer fell to 32 deg. and under, with an aggregate of 193 degrees of frost. This compares favourably with the two previous years, there having been in 1888, 83 nights of frost, with an aggregate of 293 degrees; and in 1887, 96 nights, with an aggregate of 360 degrees. An unusual circumstance was the absence of frost in April and May, in the former of which there was only one night on which the protected thermometer fell slightly below the freezing point, while in May the lowest recorded temperature was 40 deg., the mean temperature of that month being fully 5 deg. above average. The mean temperature of the year was 48·1 deg., as compared with 46·5 deg. in 1888, and 47·2 deg. in 1887, and 46·2 deg. in 1886. This is the first year since I began to take observations that the mean annual temperature of Dumfries has reached, or rather slightly exceeded, the value assigned to it in temperature charts, viz., 48 deg. With a fully average temperature, and a sufficient but not excessive supply of moisture, the year has on the whole been very favourable to vegetation.

Rainfall.—The heaviest falls of rain within 24 hours occurred on the 6th March and the 6th June, on both of which days 1·22 in. were recorded. On the former of these days there was a continuous and heavy fall of rain during the day, followed by sleet and snow during the night. The excessive fall in June was connected with a severe thunderstorm, which began about 6 P.M., and continued with more or less severity till near midnight. The rainiest month of the year was October, with a total of 5·16 in., which fell in 21 days. But August was the month in which the greatest number of rainy days occurred, viz., 25 out of the 31, to the sad interruption of harvest work in most parts of the country. But as if to compensate for this the driest month was September, with a record of only 1·69 in. spread over 11 days.—and November, February, and June came next, all of which shewed less than 2 in.

It is worthy of note that last year also February and September were the driest months. There was a period of drought extending from 15th of June to the 6th of July, in which no rain fell, and which was characterised throughout by warm and sunny days and mild nights. The mean of the day temperature during this period was 73·9 deg., and of the night temperature fully 49 deg. The total number of days on which rain or snow fell during the year was 202, as compared with 195 in 1888, and 181 in 1887. The total rainfall for the year was 35·17 in., as compared with 35·91 in 1888, 30·99 in 1887, and 41·13 in 1886. This gives a mean for the four years in which observations have been taken at Dumfries of 35·80 in.

Hygrometer.—The mean reading of the dry bulb thermometer for the year was 47·5 deg., and of the wet bulb 45·1 deg. The difference (2·4 deg.) is exactly the same as last year, but the temperatures of this year are higher by 1·5 deg., a difference very nearly corresponding with the increase in the mean temperature of the year—from 46·5 deg. to 48·1 deg. Temperature of the dew point, 42·4 deg. Relative humidity (saturation being equal to 100) 82.

Thunderstorms.—There were eight days on which thunder and lightning were observed, viz., the 5th and 7th of May, the 2d and 6th of June, the 15th, 16th, and 23d of July, and the 8th of October. Of these the storms of 7th May, 2d and 6th June, 16th July, and 8th October were most severe. The others were either somewhat distant or of short continuance, but they were almost invariably accompanied by hail showers. Once, on 16th May, at 9 A.M., I observed a very large solar halo; and on several occasions lunar halos were observed, which, though not invariably, were for the most part precursors of the approach of a cyclone, especially if accompanied by a backing wind and a falling barometer.

Wind.—It may be interesting to note the prevailing directions of the wind during the year. From an easterly direction, including E., N.E., and S.E., it blew 228 times (observations being taken twice every day, morning and evening); and from a westerly direction, including W., N.W., and S.W., 408 times; from due N., 23 times; due S., 42 times; the remainder, numbering 29, being either calm or variable. The most prevalent wind is S.W., which during the past year blew on 108 days out of the 365. It is to the prevalence of this wind in November, December, and January that the mildness of our winters is chiefly due.

We are indebted to Mr Bruce of Dalshangan for the following note of observations taken during 1889 at Dalshangan, in the parish of Carsphairn, which is about 500 feet above sea level. Temperature—highest, in June 79·5 deg; lowest, in March, 14 deg; range, 65·5 deg.; mean temperature of the year, 45·9. Rain-fall—rainiest month, December, 6·07 in.; driest, June, 0·73 in. Total for year, 44·50 in.

II. *Notice of Antiquities found in Dumfriesshire, and now preserved in the National Museum in Edinburgh.* By GEORGE F. BLACK, Ph.D.

In describing the objects and implements from Dumfriesshire in the National Museum it will be convenient to take them in the order of their antiquity. According to this arrangement the implements of flint and stone are the first to be described.

The implements of flint, stone, and bronze found in Dumfriesshire and now in the National Museum are few compared with the number from one or two of the neighbouring counties, as, for example, Wigtownshire.* Nevertheless, the specimens, such as they are, are interesting and valuable for the purposes of comparative archaeology.

STONE IMPLEMENTS.

1. *Axes.*—Axehead, or celt of felstone, $6\frac{1}{2}$ inches in length, by three inches across the widest part at the cutting edge, which is of oblique form. The sides are flat, and the cutting edge is slightly fractured on each face. The obliquity of the cutting edge is supposed by some archæologists to be due to resharpening. This axehead was found at Dinwoodie Green, and was added to the Museum by purchase. An axe of the rare type, with sharp sides, was discovered in blowing up some large stones, possibly those of a dolmen, at Mains, near Dumfries, in 1779, and is described in the *Archæologia* (vol. vii., p. 414) as of “fine granite stone, highly polished, 9 inches long, $4\frac{1}{4}$ broad at one end, tapering to the other, its thickness in the middle $\frac{6}{8}$ of an inch, and quite sharp at the edges all round.” †

II. *Wedge-shaped Hammers.*—About the year 1840, Mr Graham, of the farm of Westhills, near the Solway, took down an

* The great abundance of the specimens from Wigtownshire is due to the fact that the sandhills of Glenluce, like those at Culbin, Elginshire, occupy the site of a prehistoric flint implement manufactory.

† Quoted by Evans, *Ancient Stone Implements*, p. 97.

old wall, which was said to have stood upwards of two hundred years, and the hammer here described was found embedded in it. The hammer is of whinstone, and measures $11\frac{3}{4}$ inches in length, by $4\frac{1}{2}$ inches across the widest part at the butt end, tapering to a point at the other, and is $2\frac{1}{4}$ inches in thickness. A haft-hole has been perforated through the flat face at about 3 inches from the butt end.

A hammer of greenstone, 10 inches in length, by $4\frac{1}{2}$ inches in breadth and 3 inches in thickness, was found at Kirk of Dunscore, and presented to the National Museum in 1827. It is a finely-made specimen, with a broad rounded butt gradually tapering to a sharp cutting edge at the other extremity. It weighs $6\frac{1}{2}$ lbs. The haft-hole is 2 inches in diameter on the outside, narrowing to $1\frac{2}{3}$ inch in the middle of the thickness.

The third and last specimen is of whinstone, $7\frac{1}{2}$ inches in length, by 3 inches in breadth and $2\frac{3}{4}$ inches in thickness, and is unsymmetrical in form. The haft-hole is 2 inches in diameter on the outside, narrowing to one inch in the middle of the thickness.

Several fine specimens of these implements are in the collection of the late Dr Grierson at Thornhill, and have been briefly described by me in the *Proceedings of the Society of Antiquaries of Scotland*, Vol. X. (New Series), pp. 374, 375.

A large and characteristic specimen of this type of implement was found on the site of a lake dwelling in the Loch of Friars' Carse, and is now in the possession of the proprietor of the place. It is of hard whinstone, 10 inches in length, by 5 inches in greatest breadth and nearly 3 inches in thickness, and has been several times figured.*

It is an interesting fact in archæology that this type of implement is much more common in the south than in the north of Scotland. Ayr, Wigtown, Kirkeudbright, and Dumfries are the four shires in which they are found in greatest number.

In the Edinburgh Museum of Science and Art there is a fine specimen of a hammer of a type peculiar to Shetland and the extreme north of Scotland. It is said to have been found in a wall at Dumfries, and is the largest specimen of the type known to me to have been found in Scotland. It measures 5 inches in

* *Proceedings of the Society of Antiquaries of Scotland*, Vol. IV., New Series, p. 76; Munro, *Scottish Lake Dwellings*, p. 156, and *Lake Dwellings of Europe*, p. 440; Anderson, *Scotland in Pagan Times*, Second Series, p. 317.

length, by $2\frac{3}{4}$ inches in breadth and $1\frac{1}{2}$ inch in thickness, presenting in the cross section a flattened oval. The shaft-hole is partially perforated from each face, and is at a right angle to the edges, which are rounded instead of sharp. The implement has therefore in all probability been intended for a weapon instead of a tool.

III. *Quern*.—A Quern, consisting of an upper stone 20 inches in diameter and a lower stone 21 inches in diameter, both of quartz, found in a peat bog at Canobie, and presented to the National Museum in 1863. The upper stone has three small socket-holes for the handle on its upper face.

IV. *Carved Stone Ball*.—A ball of felspathic greenstone, $2\frac{3}{4}$ inches in diameter, ornamented with six projecting circular discs, is stated by Dr (now (Sir) Daniel Wilson to have been “found

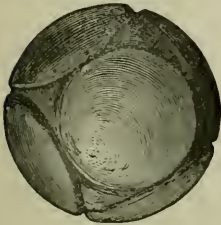


Fig. 1.—*Carved Stone Ball*
found in Dumfriesshire.

near the line of the old Roman way which runs through Dumfriesshire on its northern from Carlisle.” While the large perforated hammers already described are common in the south of Scotland and rare in the northern counties, exactly the reverse is the case with these stone balls. The only other south country specimens known to me is an imperfect one found in 1886 on the farm of Stelloch, Glasserton, Wigtownshire, and presented to the

National Museum by Sir Herbert Maxwell, and a fine one of white quartz, 3 inches in diameter, with six projecting discs, found in Cree Moss, Wigtownshire, and now in the Thornhill Museum. In the north-eastern counties, especially in Aberdeenshire, they are found in considerable numbers. Only one specimen is known to me to have been found outside Scotland, namely, the one in the British Museum, which is said to have been found near Ballymena, County Antrim, in 1850. In all probability this specimen may really be a Scotch one carried over, lost and afterwards found in the place mentioned. The Dumfriesshire specimen is shown in fig. 1, and has also been figured elsewhere.*

* Catalogue of the Museum, 1876, p. 39; Wilson's Prehistoric Annals of Scotland, Vol. I., p. 195; Evans' *Ancient Stone Implements*, p. 376; *Proceedings of the Society of Antiquarians of Scotland*, Vol. XL., p. 36; Anderson, *Scotland in Pagan Times*, First Series, p. 169.

V. *Whorls*.—Until recently there was only one whorl from Dumfriesshire in the national collection, which was found at Moss-peeble. It is formed of claystone, one inch in diameter, and differs somewhat from the usual form of whorl in being spherical shaped. In February last (1889) other six specimens, all found at Mouswald, were added to the national collection by donation. Five are of sandstone, and the sixth is of claystone. The largest is $2\frac{9}{16}$ inches in diameter, and the smallest $1\frac{3}{16}$ inch. One is ornamented on each face with incised lines radiating from the spindle hole. The others are unornamented.

VI. *Arrow and Spear Heads*.—An arrow-head of greyish flint, found at Gretna, and presented to the National Museum in 1877, is one of the finest in the collection. It is of the variety with barbs and stem, and measures $1\frac{5}{16}$ inch in length. The stem is broad and is convex at the end. The apertures between the barbs and stem are most carefully made, and the ends of the barbs slant from the inner side outward and forward. Through an oversight on Dr Anderson's part, this arrow-head is described as from Glenluce, Wigtownshire. It is shown full size in figure 2, and has also been figured elsewhere. †



Fig. 2.—*Flint Arrowhead, with barb and stem, found at Gretna.*

Another barbed and stemmed arrow-head of grey flint, also found at Gretna, is imperfect, one of the barbs being broken off.

A third arrow-head, also of the barbed and stemmed type, found at Riggmoor, has apparently accompanied an interment, as it has been subjected to the action of fire. There is little secondary working on either face, and one of the barbs has been broken off.

A fine spear-head of the barbed and stemmed type is also in the Museum. It measures $2\frac{5}{8}$ inches in length, and shows some minute secondary working on the faces. The stem is broad, square-ended, and the barbs are worked to fine points, one being a little longer than the other. It was found at Grainhead, Gretna Green.

A large lozenge-shaped spear-head of light grey flint, which was said to have also been found at Gretna Green, is in the

† *Scotland in Pagan Times*, Second Series, p. 358, fig. 358; and *Proceedings of the Society of Antiquarians of Scotland*, Vol. XII., page 270.

collection. In form and material this specimen so closely resembles a common Irish type that I have doubts about its being Scotch. It measures $3\frac{1}{2}$ inches in length, and has been formed from a large flake of almost even thickness, with a smooth fracture on each face, thus rendering surface chipping unnecessary. The edges, however, are finely worked. This specimen stands alone among the Scottish specimens in the Museum both as regards form, size, and material, but is matched by many from Ireland which are in the collection.

BRONZE IMPLEMENTS.

The commonest and best known implements of the Bronze Age in Scotland are (1) the axes, which are divided according to form, into (*a*) flat, (*b*) flanged, (*c*) winged, (*d*) socketed ; (2) daggers and rapier-shaped blades ; (3) javelin, lance, and spear heads ; and (4) leaf-shaped swords.

The flat axes are looked upon by all archæologists as the earliest, and are considered to have been modelled on the form of the earlier stone axe. The flanged axe holds a position midway between the flat and the winged varieties, in many instances resembling the latter so much that it is often difficult to distinguish between them. Many of the flanged and most of the winged axes are further distinguished by the presence of a transverse stop-ridge, apparently for the purpose of preventing the implements entering too far into its handle when in use.

The winged axes, which are often called *palstaves*, differ from those of the second variety only in having "shorter flanges, combined with a greater amount of lateral expansion." Many of these winged axes are further provided with a loop on one side in the same plane with the blade.

The socketed axes, or those which are cored to receive the handle, are with good reason considered to be the latest form of all. This variety is rarely found without a loop at one side for greater security in attachment to the handle. Dr John Evans, our highest authority on bronze implements, speaking of the evolution of the forms of axes, says : "A gradual development can be traced from the flat celt, through those with flanges and wings, to the palstave form, with the wings hammered over so as to constitute two semi-circular sockets, one on each side of the blade ; while on certain of the socketed celts flanges precisely similar to those of the palstaves have been cast by way of ornament on the sides, and what

was thus originally a necessity in construction has survived as a superfluous decoration." *

I. *Bronze Axes*.—Dumfriesshire is unrepresented in the national collection by either the flat or the socketed varieties, there being only one flanged specimen and three of the winged type. The flanged example is a very fine specimen, and measures $5\frac{1}{2}$ inches in length. The lower part of each face below the stop-ridge is ornamented with narrow vertical grooves, and the outer sides of the flanges are ornamented with a cable pattern, similar to another flanged axe found near Perth and figured on page 60 of

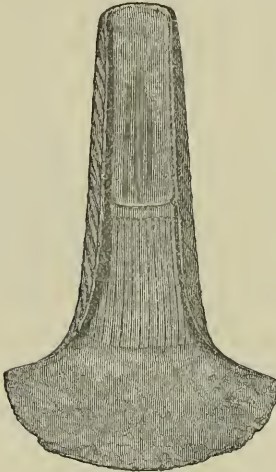


Fig. 3.—Flanged Axe of Bronze, ornamented,
Found at Applegarth.



Fig. 4.—Winged Axe of
Bronze, found at
Canobie.

Dr Evans' work already quoted. The Dumfriesshire specimen, which was found at Applegarth, is shown in figure 3, and has also been figured elsewhere. †

A winged axe found at Birrenswark measures 5 inches in length by 2 inches across the broadest part of the cutting edge, which is semi-circular in form. The wings are of lozenge form, and the stop-ridge on each face is imperfect through a flaw in the casting. The bronze is of a bright yellow colour.

* *Ancient Bronze Implements*, p. 107.

† *Proceedings of the Society of Antiquaries of Scotland*, Vol. XII., p. 602 ; Evans, *op. cit.*, p. 60 ; Anderson, *Scotland in Pagan Times*, Second Series, p. 196.

The second winged axe was found at Canobie, and measures $4\frac{1}{2}$ inches in length by 2 inches across the cutting edge, which is semi-circular like the Birrenswark specimen. The wings are triangular in form and are slightly bent over the faces toward each other. There is no stop-ridge, and the butt is imperfect on one side. This axe is figured in the *Proceedings of the Society of Antiquaries of Scotland*, Vol. VII., New Series, p. 163, and the illustration is here reproduced as figure 4.

The third and last specimen was found at Mouswald, and measures $4\frac{1}{2}$ inches in length by $1\frac{5}{8}$ inch across the cutting edge. The wings are of lozenge form with rounded angles, the butt is slightly imperfect, and there is no stop-ridge.

II. *Dagger*.—Of the type of weapon known as dagger, the National Museum possesses a very fine example which was found near Gretna. It measures 7 inches in length by 2 inches across the widest part of the handle plate. The blade is fluted at the edge, and is strengthened by a slightly raised ridge along the centre on each side. This blade has been attached to a handle of wood, bone, horn, or ivory, by two rivets, also of bronze, each $\frac{5}{16}$ inch in length, both of which are still in place. This dagger is shown on a scale of one half in figure 5, and has also been figured elsewhere.*



Fig. 5.—Dagger of Bronze, with Rivets, found near Gretna.

III. *Rapier Blade*.—A rapier blade of bright yellow bronze is also in the national collection. It measures $10\frac{3}{4}$ inches in length, but a piece about $\frac{3}{4}$ inch in length has been broken off the point. The breadth of the widest part of the butt is $2\frac{1}{2}$ inches, and the base is pierced for two rivets, which have been lost. These rapier blades hold an immediate position between the dagger-blade already described and the

* *Proceedings of the Society of Antiquaries of Scotland*, Vol. II., New Series, p. 97; and in Dr Anderson's *Scotland in Pagan Times*, Second Series, p. 176.

leaf-shaped swords, though some archæologists have suggested their use as spear-heads. This specimen was found at Fairholm, Lockerbie, and is very similar to one found at Coveney, near Downham Hithe, Cambridgeshire, figured on p. 249 of Dr Evans' work.

Three fine specimens of rapier blades, all found at Kirkgunzeon, $8\frac{3}{4}$, $14\frac{1}{2}$, and $15\frac{3}{8}$ inches in length, are in the Thornhill Museum.

IV. *Sword*.—The only other weapon of the Bronze Age in the national collection is a portion of a bronze leaf-shaped sword, now only $10\frac{1}{2}$ inches in length. It is imperfect at both ends, but the handle end shows two rivet holes in each wing and the side of another in the handle plate at the point of fracture. When perfect this sword would have been about 21 or 22 inches in length. No precise locality is attached to it.

V. *Caldron*.—A caldron, formed of thin sheet bronze, found in Whitehills Moss, Lochmaben, has recently been added to the national collection by purchase. It measures $13\frac{1}{2}$ inches in diameter across the mouth, and 15 inches across the widest part at the middle, and is $8\frac{1}{4}$ inches in height. The rim is gone, but its presence is attested by several rivet holes round the mouth of the caldron.

A caldron of similar form to the one just described, but slightly larger, was found not long since at Kyleokin, Skye, and is figured in the *Proceedings of the Society of Antiquaries of Scotland*, Vol. VII., New Series, page 311.

Another one of somewhat similar form, 25 inches in diameter, and 18 inches in height, which was found in Carlingwark Loch, Kelton, Kirkcudbright, contained a large number of tools, such as hammers, chisels, saws, &c., of iron. It is now in the National Museum, along with its contents.

These caldrons are assigned to the close of the Bronze or beginning of the early Iron Age.

As regards the date of the Bronze Age in Britain, archæologists are agreed in assigning its origin to between 1500 and 1200 years B.C., from which date it continued till about the third or fourth century B.C., when iron appears to have become known.

6th of February, 1890.

Rev. WILLIAM ANDSON in the Chair.

New Members.—Mrs Maxwell Witham and Miss Maud Maxwell Witham of Kirkconnel.

Donations.—Transactions of the New York Academy of Sciences (February to June, 1889); Proceedings of the Canadian Institute, Toronto, for October, 1889.

COMMUNICATIONS.

I. *Notes on Birds.* By Mr JOHN CORRIE.

I have to report two noteworthy additions to my ornithological list for the parish of Glencairn, viz.: (1) The Great Snipe (*Scolopax Major*); (2) The Spotted Crake (*Crex Porzana*). Neither of these species would appear to be very common in Scotland. Morris, while recording the Spotted Crake for Dumfriesshire, says that the species is a very local one, and in his notice of the Great Snipe he gives no nearer localities than Orkney on the one hand and Northumberland on the other. It is not unlikely, however, that both birds occur sparingly throughout our counties, more particularly, I would imagine, the county of Kirkeudbright, where the lochs are numerous and of a character in keeping with the tastes of such birds. The Dabchick, I am glad to say, continues to nest in the parish. Last year the birds were subjected to so much annoyance by some boys that I was quite prepared to see them forsake the locality. This summer they nested as usual, however, and, I have reason to believe, succeeded in rearing a brood in safety. A new nesting locality for the Redshank has been discovered in Stroanshalloch Loch, a remote nook where the birds may be considered secure. The Goldfinch, a species that has long been scarce in the district, would appear to be again becoming common. Several small flocks have been observed this winter, and individuals are of frequent occurrence. It is to be hoped that this increase will not tempt the bird-catchers to a renewal of their ignoble craft. The present season, as is well known, has been a remarkably mild one, and the birds as was to be expected have been greatly influenced thereby. The Common and Black-headed Gulls, for instance, which visit us but rarely at this season, may be seen daily. The Grey Wagtail has also been observed, although only once. On the other hand, the Brambling Finch, a bird which never fails to visit us in severe weather, has

been conspicuously absent. The Raven has been seen once. Birds of prey have been even scarcer than usual. Speaking of birds of prey, I am disposed to claim for Glencairn the honour of having contained the last Dumfriesshire "Gled" or Kite (*Milvus Regalis*). The year of its death would be 1869 or 1870.

II. *The Balance of Nature in Regard to Our Fisheries.*

By Mr J. J. ARMISTEAD.

In the course of this paper, Mr Armistead said that interference with the balance of nature was a matter which required a considerable amount of consideration. After an allusion to the rabbit pest in the antipodes, Mr Armistead pointed out that the killing of birds and beasts of prey, and so disturbing the balance of nature, cleared away many enemies of rats, &c., and thus left these in abundance. Undoubtedly, where man thoughtlessly interfered with nature's balance the result probably meant loss to himself, but where thoughtfully done the result was profitable. He alluded with satisfaction to the introduction of trout from this country and America into the rivers and lakes of New Zealand, and then went on to say that in many cases man had inadvertently or of necessity interfered with the balance of nature as far as regarded our fisheries. Instances of this would be found in the alteration of the flow of water, and its pollution, as well as the draining of hills, the latter practice cutting off nature's supplies for dry weather. The drainage of the hills had undoubtedly affected our rivers very materially, and every practical fish-culturist had become assured of that fact. Many large streams flowed into the Solway, for instance, carrying into it rain and snow water from a district ten times as big as the Solway itself, which, on account of the shallowness of the Solway, had a very material effect upon its waters. The North Sea contained a great number of fish, because it also contained immense quantities of other marine creatures, such as crustacea, worms, mollusca, echinoderms, &c. For the young fish which had been recently hatched, the presence of small microscopic organisms in very large numbers was of vital importance. At the very time when fish left their eggs the sea was full of young crustacea, mussels, and echinoderms, so that the little fishes inhaled as it were with the water they breathed large numbers of these exceedingly minute creatures. After a description of the effect of partially-drained lakes, Mr Armistead alluded to the work that could be done towards training fish to rise to the different flies. He

himself had at his place introduced a sort of training school, and tried experiments with food which would float on the surface of the water, or, at all events, not sink very deep. Mr Armistead, speaking of shad hatching in America, quoted a Mr Worth on the subject, who said that the great success achieved in the propagation of this fish demonstrated what could be done with many other valuable fish. The success of the shad-hatching work carried on by the United States Fishery Commission had been proved beyond the shadow of a doubt. At first the fishermen were rather inclined to oppose the work, but now they were willing helpers, and the shad fisheries, which showed a great falling-off prior to the commencement of the work, had since wonderfully improved, and showed an increase in the "take" each year. The evidence, too, which was very voluminous, was conclusive as to the successful operations of the Commission. There were rivers where shad had never before been seen, and now, as the result of the work of artificial propagation, they were teeming with shad. Going on to speak of disease among fish, Mr Armistead said where fungus existed it was impossible to exterminate it, but it might be prevented from attacking fish by antiseptic treatment. The problem of fungus epidemics was a difficult one. The fungus was always present, but only occasionally in an epidemic form, and fish could live happily in affected rivers. He was much indebted to Mr Allan P. Swan, of Bushmills, County Antrim, for the results of his interesting investigations in this matter. Mr Swan said, and he agreed with him, that the condition of health in fishes has much to do with the fungus disease. The first consequences of a low vitality might be a slow or imperfect excretion and epidermic formation. Sickly fish were attacked, and many of the fish which died in our rivers were no doubt the legitimate food of the fungus, and one of its chief means of propagation during the cold winter weather when development was not so rapid. The purest water was as favourable to the growth of fungus as any other, and pollutions were unfavourable to fungus, as the chemicals in these pollutions were apt to destroy the fungus. The life history of the fungus had been well worked out, and they now knew probably as much about it as was at all necessary, and any points left unravelled could easily be worked out to the smallest detail with time and patience. He thought this could not, however, be said of the salmon, and it was the missing link in the life history of the fish that required all the energies of both scientists and practical men

to elucidate the matter as was deserving of it. Until this could be done we might and would go on floundering in the mire. This was one of the cases in which by judiciously interfering with the balance of nature a vast amount of profit might accrue to the possessors of our fisheries. It was like a valuable mine of wealth unworked.

7th of March, 1890.

Major BOWDEN in the Chair.

New Member.—Mr Robert Maxwell Witham of Kirkconnel.

Donations.—Transactions of the Edinburgh Botanical Society; Annual Report of the Belfast Field Club; Report of the Berwickshire Naturalists' Club; Bulletin on the English Sparrow in North America and North American Fauna, from the United States Board of Agriculture. The Transcription of Edgar's History of Dumfries from the Riddell MS. was also handed in.

COMMUNICATIONS.

I. *The Succession of Plant Life upon the Earth.* By Mr PETER GRAY.

After a brief exposition of the nature and mode of deposition of the sedimentary rock strata in which the remains of previously existing plants and animals are found, the author enumerated their principal sub-divisions and defined the four life periods in which they have been further arranged, namely, the Azoic (without life), the Palæozoic (ancient life), the Mesozoic (middle life), and the Kainozoic (new life). There were no dates in the geological record, and, as to the length of time occupied in the laying down of the sedimentary rocks, there was the widest diversity of opinion. Physicists, judging from the rate of cooling of the globe, and other data, were unwilling to place the time when it was possible for plants to exist upon it much farther back than from ten to fifteen millions of years. On the other hand, some geologists asked for at least six hundred millions. Of the shortest of these periods, however, we could no more form a competent conception than we could of eternity. Proceeding then to a detailed examination of the sedimentary deposits, from the earliest upwards, the author stated that though no fossils had been discovered in those of the Azoic period, yet the immense quantity of carbon, in the form of graphite or plumbago, occurring

in them, might reasonably be taken to indicate the previous existence of plant life, as we knew of no other source of unoxidised carbon than what is furnished by plants. Passing onwards to the Palæozoic period, it was shown that, to its close, the only vegetable remains that had been discovered were those of plants allied to the humble club-mosses of the present day, then, however, assuming the dimensions of lofty trees, other gigantic plants related to the equiseta or horsetails, ferns in innumerable species, and the lowest class of flowering plants (gymnosperms) of the same nature as the pine and yew. The characteristic vegetation of the Palæozoic period died out in the Permian formation, and the flora of the early Mesozoic was at first transitional, although there was no great advance. However, about the end of the latter period, whether from a gap in the record, or from whatever cause, there appeared a sudden and wonderful incoming of the higher classes of the vegetable kingdom, including the existing genera, so that the aspect of the flora was the same as that of the present day, though it was much more varied, and cryptogams and gymnospermous phanerogams sank into the subordinate position they now occupy. This has been justly described as the true Edenic period of the earth's history, when the dry land was clad, perhaps from the very Pole, at least from the latitudes of Greenland and Spitzbergen, with an exuberant growth of foliage, flower, and fruit, accompanied by a remarkable uniformity of temperature throughout the globe. It was a noteworthy fact that the successive vegetable forms which have from time to time overspread the earth's surface appear to have originated within the polar circle, and this might now be regarded as established. Throughout the greater part of the Tertiary period, the land, in the northern hemisphere at least, continued to increase, and was tenanted by the "noblest vegetation and the grandest forms of mammalian life the earth ever witnessed." But towards its close a gradual refrigeration set in—the "great ice age" was approaching. Slowly, but surely, the ice and snow which formed in the now frozen zone spread downwards, until even within the tropics glaciers filled the mountain valleys, and the rich and multiform Tertiary flora was either destroyed or driven towards the equatorial region. This wintry period having at length come to an end, the exiled plants straggled back to their native soil, a sadly diminished band. The thick-ribbed ice that burdened so large a portion of the polar and temperate zones did not, they might be

sure, pass away without great disturbance, probably, in melting, raising the level of the ocean at least 1000 feet, perhaps causing a shifting of the earth's centre of gravity, certainly overwhelming much of the previously existing solid land. From the glacial period to the present time there had been no change in the species either of plants or animals, except that some of both have become extinct. In conclusion, the author said that he had not referred to the genesis of the various forms of plant life, extinct or existing. There was, however, it must be admitted, little in plant history, as at present elucidated, to support the evolutionary hypothesis. Still, in the main, there had been an advance in plants, as in animals, from the simpler to the more elaborate structure. In the great plan of Providence that was an abiding feature—

“ From lower to higher, from simple to complete,
 This is the pathway of the eternal feet. . . .
 This is the solemn lesson of all time,
 This is the teaching of the voice sublime.”

II. *Notes from Original Sources on the Erection of the Mausoleum and the Origin of the Dumfries Burns Club.*
 By Mr JAMES R. WILSON.

The paper was compiled from the minute book of the Mausoleum Committee, of which Dr Grierson's father (Mr Wm. Grierson of Baitford) and the Rev. Henry Duncan of Ruthwell were secretaries, and from numerous letters from the celebrities of that time found among the effects of Dr Grierson, Thornhill, which letters Mr Wilson produced for the inspection of the meeting. A preliminary meeting of the “ friends and admirers of the late Scottish bard, Robert Burns,” Mr Wilson said, was held in the George Inn, Dumfries, on 16th December, 1813, for the purpose of taking into consideration the measure of opening a subscription for erecting a Mausoleum over his remains—John Syme of Ryedale in the chair. It was reported to the meeting that a number of gentlemen had signified their approbation of the measure, and it was thereafter agreed to form a Committee, and to adjourn the meeting to 6th January following. At the adjourned meeting General Dunlop, M.P., son of Mrs Dunlop, of Dunlop, the poet's friend, was called to the chair, and it was intimated that a large number of noblemen and gentlemen highly approved of opening a public subscription for the purpose. A large and influential Committee of noblemen and gentlemen was formed, and also a special Committee

with Dr Duncan, Dumfries, as convener. The raising of subscriptions, Mr Wilson said, had apparently been gone about in a most energetic manner, and he proceeded to read the following letter written by Mr (afterwards Sir) Walter Scott to the secretaries from Edinburgh on 14th January, 1814 :—

I am favoured with your packet enclosing proposals for erecting by subscription a monument to the memory of Burns, and I am very much obliged to you for affording me an opportunity of testifying my high veneration for the Ayrshire Bard. My society is very limited, but I hope to get some subscriptions, and would be much obliged to you to send me a list of such as have been already procured that I may have some general rule for assisting my friends, for I have observed that it is often advantageous to have an idea of what would be thought liberal and handsome. I beg you will put my name down for ten guineas, without limiting myself to that sum, however, should there be further occasion. We have to regret the loss of Mr Stark, the only architect in Scotland, as I greatly fear, who could have given a plan of simplicity and dignity corresponding to the genius of the author. I presume it is only meant to inclose, not to alter or violate, the stone which Mrs Burns placed over her husband. The situation is in all respects highly striking.

I will take the liberty to send one of the papers you have sent me to Mr Constable, the bookseller here, whose influence is considerable, and opens some avenues to which I have not personally any access.

WALTER SCOTT.

Edinburgh, 14th January, 1814.

On 29th of same month the poet's brother Gilbert wrote to Mr Grierson from Grant's Braes :—

Grant's Braes, 29th January, 1814.

I received yours of the 12th inst. covering resolutions of a meeting at Dumfries of the 6th inst. You will readily believe that I was much gratified with the exertions of a meeting so respectable to make so great a public testimony of their regard for my brother's memory. It will readily occur to every gentleman concerned that however much I might be inclined it is a matter I cannot stir or be seen in. I am not very sanguine in my expectations of aid to the subscription in this neighbourhood. I believe my brother was personally known to David Anderson, Esq., St. Germain's, near Tranent, a most respectable gentleman, and a man of taste, but of too shy and delicate a cast for bringing the subscription much forward. Robert Stewart, Esq. of Alderston, near Haddington, was in India, I believe, at the time of my brother's death, and has been more successful in the pursuit of wealth than of literary taste, in which he has not been much engaged, but I have heard him talk emphatically of heaven-born genius, &c. His near neighbour, Robert Veitch, Esq., Hawthornbank, is himself a votary of the muses, and sufficiently

enthusiastic, but as he has a large family and his circumstances comparatively moderate, I am not sure that it would be right to make any call on his purse. Alexander Houston, Esq. of Clerkington, M.P. for Glasgow in the last Parliament, has shewn me more obliging and useful attention than any other great man in this country, but though his subscription will not be wanting if applied for, yet, I suppose he would not like to solicit subscriptions. I have thought it right to mention these gentlemen to you that Mr Duncan may judge how far it will be proper to apply to any of them. A Mr Richardson, merchant in North Shiels, once left a letter for me at the King's Arms, Dumfries, inclosing some poems of his own. As I had many communications of that kind from people I knew nothing of, I never thought of taking any notice of them. I happened lately, however, to meet an English clergyman who is intimately acquainted with Mr Richardson, who spoke in high terms both of his talents and worth, and that he had risen from a low beginning to considerable eminence and success in life. I may likewise mention to you that he is a leading member of a Marygold Society in North Shiels. I should think him a person very likely to interest himself in promoting the subscription.

GILBERT BURNS.

And George Thomson, Edinburgh, the correspondent of Burns, wrote to Mr Syme of Ryedale of date 10th May following :—

Edinburgh, 10th May, 1814.

It gives me the greatest pleasure to find that there is now a certainty of a monument being erected to the memory of the greatest poet our country has produced. May I request that you will put down my name for five guineas ?

I cannot help feeling some anxiety that a design should be obtained worthy of the illustrious dead, and honourable to those who take charge of it. This will depend entirely on the artist to whom you apply, and 'tis of the utmost importance, therefore, to fix upon one who is decidedly eminent for invention, knowledge, and classical taste, and to be guided entirely by him. For if gentlemen get various designs and then exercise their own judgment upon them, the chance of their chusing the worst is much greater than that they would chuse the best ; for this obvious reason—that there is no art or science in which our countrymen are so utterly ignorant as that of architecture or sculpture. The fine arts do not make a part of the studies either of our men of fortune or of those educated for the liberal professions. And if they acquire a smattering of knowledge after they leave the University, it is generally so superficial that it only serves to give them pretensions and to mislead them. Even those who live by the profession of architecture in Scotland are notoriously uneducated and ignorant, and since the recent death of the truly ingenious Mr Stark, I do not know one of our countrymen who deserves

the name of an architect. If there are any whose fame has not reached Edinburgh, I ask their pardon.

The gentleman to whom I would strongly recommend it to you to apply for a design is Mr Smirke, R.A., London, an eminent painter well known to every amateur of the fine arts, or to his son, the architect in London, well known by his design for Covent Garden Theatre, the front of which is worthy to have stood in Athens.

I presume the design for Burns' monument will be architectural, or chiefly so; whatever there may be of sculpture about it will, I should imagine, consist only of alto or basso relievo. Now, the Messrs Smirke are, of all the artists I can think of, the most competent to give you a chaste, classic, and noble design, in whatever style the fund may permit it to be executed. Sculpture, I believe, even in bas relief is very expensive, and if the fund should not admit of a monument sufficiently large to be a striking object, and of much ornament from the sculptor to be superadded, then you must no doubt be contented to have the one without the other, or with the less of it. As soon as you have ascertained the total amount of the fund you should state it to Mr Smirke or the artist to whom you apply. Give him a slight drawing to show the elevation and form of the ground where the monument is to be built, letting him know the exact price of building per cubic foot in Dumfries with the best freestone, and ask a design architectural and as much ornamental as he thinks it ought to be, and as the fund will admit of, beseeching him to estimate it correctly, and not to let you begin what the fund will not enable you to finish, an error into which we Edinburghers have fallen most grievously, and more than once, as our unfinished University and Nelson's Monument do testify.

I had a conversation soon after the lamented death of Burns with Mr Smirke, R.A., upon the very subject of a monument to the poet. Upon that occasion he expressed his highest admiration of his genius and writings, said he would be happy to furnish a design, and I understood him to say that profit would be the least thing he should have in view. And I remember well he expressed it to be his conviction that if any respectable character on 'Change in London would take charge of a subscription paper for erecting a monument to Burns and set about it in earnest, he would get many hundred pounds in two or three days.

What would you think of writing to Sir James Shaw or any other warm-hearted Scotsman on this subject who has influence among those most liberal of all men, the London merchants?

If you write to Mr Smirke you are at liberty to communicate what I have said.

G. THOMSON.

Mr Wilson added that he might mention a fact in connection with Thomson which was not generally known. In a letter by Dr Patrick Neill, Canonmills, to Mr Grierson of date 4th February,

1850, the following occurred: "I had the satisfaction of seeing old George Thomson last week. He tells me he *never saw* Robert Burns, although he corresponded so much with him, and got him to write some of his finest words for the old Scottish airs." Friends and admirers of Burns in all parts of the world were asked to subscribe to the fund. The Provost and Magistrates of Dumfries gave the scheme their countenance. Mrs Jordan, the celebrated actress, gave a performance in Dumfries in aid of the funds, as is shown by this play bill, which produced £33 18s; and Sir Walter Scott was instrumental in securing the valuable services of Mr and Mrs Siddons for the same object, and they gave a full dress benefit night in Edinburgh, which realised the sum of £39 14s. His letters to Mr Grierson on that subject were as follow:—

Edinburgh, 20th May, 1814.

I did not answer your last favour because I did not find an opportunity to suggest to Mr Siddons the plan of a benefit for Burns' Monument. The fact is there are so many demands of this nature upon a theatrical manager that unless I were to find a very favourable moment I should not much like to suggest any thought that may enlarge this tax. My own idea was to speak to John Kemble when there, which would have been certain to make a house, but I was obliged to leave town while he was acting. I will keep the proposal, however, in view; in the meantime, I send some subscriptions on the other side, which may be added to those lists already circulated.

My own circle of friends is very limited, but I trust to get a good many guineas if I go to London before the books are closed. I have always declined taking money, so that you will have the trouble to collect the subscriptions by some proper person here.

WALTER SCOTT.

Edinburgh, 3d December, 1814.

I have only time to write you two lines, being very busy just now. Mr Siddons readily and handsomely agrees to give the benefit, and gives two guineas himself. The expense of the house is £40. It holds £200. I must endeavour, though my interest lies little in that way, to get some women of fashion to patronise the thing, when possibly we may gather £100.

WALTER SCOTT.

Edinburgh, 14th December, 1814.

Our benefit took place last night. We had by no means a crowded but a very genteel audience. The boxes particularly were filled with fashionable people, but neither the pit nor gallery so full as I should have expected they might have been from the name of the bard. In this

instance the higher classes have been more favoured in doing honour to Burns' memory. Mrs Scott took two boxes, and used all the influence she had with her friends, of whom several took boxes and filled them well. So if the returns do not quite equal our zeal and my expectations it is not our fault. But the produce will be something considerable. As Siddons has behaved so handsomely, the gentlemen of the Committee will probably be of opinion that it will be proper to write him a letter of thanks, by which he will be highly gratified. Both he and his wife gave us a good play and farce, and did all that could be suggested for rendering the evening productive. I will pay my subscription to Mr K. W. Burnet, who will also, I hope, take the trouble to settle with Mr Siddons and remit the money

WALTER SCOTT.

On the 8th February, 1816, Walter Scott again wrote to Mr Grierson :—

You were so good some time since as to send me a drawing of Burns' Mausoleum, which I think will look very handsome. I believe I am in debt to the fund in the sum of £5 received from Mr Weld Hartsteng, of Dublin. I got the sum when I was in England, and wrote to a friend to send the said sum to you, but I fancy it was neglected, as looking over my receipts from him I do not see any from you, so I am afraid it was forgotten. Should it be otherwise, you will have the goodness to return the £5 note which I now enclose.

I think it would be highly advisable to repair the old monument at Kirkconnel, but I feel somewhat doubtful whether there would be perfect good taste in placing upon it our ingenious friend Mr Mayne's very pretty verses. I should rather prefer doing what has been done on the tomb of Sir John the Grahame at Falkirk, (*i.e.*) cutting a new stone of the same dimensions and exactly a fac simile of the old monument. There is something in the forlorn simplicity of the *hic jacet Adamus Fleming* that I think would be injured by any modern additions. I do not the less admire Mr Mayne's verses, to which he has added a very good stanza. I intend to solicit his aid in getting words for some fine Gaelic airs lately collected by Alex. Campbell, which I think will prove the purest as well as most extensive collection of Scotch music yet made, as he has recovered some very fine airs.

WALTER SCOTT.

Edinr., 8th Feby., 1816.

About fifty plans, designs, and models were received, out of which twelve were selected as preferable to the others, and at an adjourned meeting of the Committee and subscribers held on 25th April, 1815, the design for the mausoleum by T. F. Hunt, architect, London, was adopted, while that of John Hendry, Edinburgh, was placed second. Mr Hunt declined to accept the premium

of £10 to which he was entitled as successful competitor, and agreed to furnish working drawings free of expense. His working plans and drawings are still preserved in the Museum in Thornhill. Builders' estimates were advertised for, and that of John Milligan, Dumfries, amounting to £331 8s 6d, was accepted, and Mr James Thomson was appointed superintendent of works. On 30th May following the Committee "having walked down to the Churchyard and inspected the burial place of Burns, are of opinion that it is so much encumbered with monuments and tombstones surrounding it and a risk that it may still be more obscured by other erections, have therefore resolved, with the consent of Mrs Burns, to remove the whole remains of the family to another and more eligible situation in the new burial ground, and the mausoleum erected over the remains is agreed on, the remains to be removed in as delicate and proper a manner as possible." This resolution was carried into effect, and on the King's birthday, 5th June, 1815, a grand procession took place, and the foundation stone of the mausoleum was laid with masonic honours, and the usual documents and coins deposited therein. On the same day the Committee, architect, Mr Turnerelli, sculptor, London, and others dined in the King's Arms, and at a subsequent Committee meeting the Apollo's head, for the centre of the dome, designed by Mr Hunt, and also the designs for the daisy and thistle to surround it, were approved. Mr Hunt at the same time marked off the ground in the new burial-ground. Previous to this Mr Turnerelli had sent in a design for the sculpture. On 6th June the Committee met with Mr Turnerelli, and it was agreed to adopt his design provided the necessary sum could be procured either to erect it in marble or Roach Abbey stone. His estimate for marble and figures of life-size was 750 guineas, and if the figures were a quarter less 600 guineas. On 8th June the Committee, architect, and others were entertained to dinner in the King's Arms Hotel by the magistrates of Dumfries, when the freedom of the burgh was conferred on Messrs Hunt, Turnerelli, Walter, and Captain Hehl. At this stage many difficulties began. The contractor for the mausoleum was troublesome, and tore in pieces the committee's written remonstrances as to the insufficient jointing of the granite steps. He placed stones in the dome disconform to contract both as regards thickness and quality, and Mr Hunt had to step in and see his directions carried out. The Committee inspected the model of the plough for the sculpture

as made by Mr Smale, of Edinburgh, and for which he charged £4 4s, and thought it should not have cost above a guinea, or 40s at most. It is noted "that the plough in Mr Turnerelli's model not being considered anything like the ploughs used in Scotland, it was judged proper to have a model of a proper plough made by Mr Smale in Edinburgh, to be sent to the sculptor in London." On 9th August, 1816, the Committee inspected the building, and condemned the execution of various parts, and particularly "with respect to the stone which Mr Milligan calls an Apollo's head, which he has placed in the centre of the dome, the Committee can have nothing to do with it, and require Mr Milligan to remove it, as an Apollo's head is preparing in London under the direction of Mr Hunt, as originally resolved, and which must be placed in its proper situation when received. The daisies are not according to the patterns sent by Mr Hunt, but not having been sent in time the contractor could not delay the work, and was obliged to proceed with his own idea of the pattern." The Apollo's head was duly received, and a duty upon it of £2 12s 9½d was paid at the Custom House. Mr Thomas M'Caig and Mr Alexander Crombie were arbiters in settling the sum due to Mr Milligan, and found him entitled to an extra payment of £101 16s 2d, and at a Committee meeting a letter by Mr Milligan to Mr Hunt was read, "of so scurrilous a nature as to be altogether unworthy the notice of the meeting, they determined to treat it with the contempt it deserves." Work ceased, and the Committee agreed to employ a tradesman to finish the curtain wall; and also to enter into another reference with the contractor for the work performed on curtain walls, and a charge for rejected dome stones. An interdict followed the erection of the iron gates at the instance of Mr Milligan, and they were allowed to be put up after the matter had been heard before the magistrates. Mr Milligan again began work at the curtain wall, and he in turn was interdicted by the Committee, and after hearing he was dismissed from the work. Mr Hunt prepared drawings for the sarcophagus, which were approved; but great difficulties had to be overcome in regard to it on account of Mr Milligan, the contractor, insisting on doing all the work, although the Committee considered only a professional sculptor could properly execute it. Difficulties also arose in connection with the proceeds of the subscriptions received at the commemoration dinner held in London on 25th May, 1816, over which the Earl of Aberdeen presided; but in the end Mr A. Gordon, the

Committee's agent in London, and Mr Hunt and Mr Turnerelli effected a settlement, and the latter received £220 from this source as a first payment to account of the contract price of the sculpture. In connection with this dinner it may be noted that the subscriptions and dinner tickets brought in £528 3s 6d, while the dinner and expenses connected therewith brought the clear balance down to the above sum of £220.

The whole work was now approaching completion, and on 8th August, 1818, Mr Hunt reported upon it to the Committee, who afterwards met and gave effect to a number of his suggestions, and made arrangements for the sculpture being shipped to Dumfries. Mr Turnerelli, however, would not part with it until he knew how the balance due to him would be made good.

Mr Wilson here read the correspondence between Mr Turnerelli and the Secretary in regard to this matter. Mr Turnerelli first wrote regretting that the proposition of exhibiting the marble monument of the poet in Edinburgh had not met the approbation of the Committee, and declaring that he felt it to be his duty to ascertain previous to its being forwarded to Dumfries how and in what manner the Committee intended to discharge payment, particularly as there were no funds in hand, and the Mausoleum in its unfinished state had cost more than £800, and would require a sum set apart after being finished to keep it in repair. He positively asserted that the monument was worth double the sum stated in his estimate to the Committee. Replying to this letter, the Secretary wrote to Turnerelli, and in the course of his letter said the Committee "considers that it (the letter) reflects no credit on you, and is in direct opposition both to your profession and agreement. I need not again recapitulate your own proposal and agreement which of yourself you ought not to have forgot, but which you have not had the candour to admit—on the contrary, have studiously avoided taking notice of—as if the Committee had been acting as children and not to have known what they were doing. However, every transaction is minutely narrated, and the proposal and agreement distinctly stated, which you cannot deny, or should you attempt it there are sufficient witnesses to prove the fact, which we must now establish on oath, since we see now who we have to do with. Although we have hitherto been disappointed in procuring the funds we have good reason to expect, yet we have confident hope of very considerable sums from different quarters, abroad particularly. We had lately

advice of £160 being subscribed in Demerara, and the prospect of its being made out £200, and in all probability we will receive it early in the spring, as the gentleman, a native of this place, is then expected, who had the management, and we are at present in correspondence with America." "Surely," the letter went on to say, "he could not expect the Committee to advance the money out of their own pockets, particularly for a work not delivered, although part paid for, and which none of them had ever seen or heard any opinion of except from Mr Turnerelli himself. They had never urged the affair upon him, but he had urged himself upon the Committee." The letter added, "you have already our ideas respecting exhibiting in Edinburgh. The Committee never entertained the idea of exhibiting the tribute to the memory of Burns through the country as a *pupit show*. We feel more veneration for our country and our Bard."

Further correspondence of a similar nature followed, and in the end the sculpture was sent down from London and placed in the Mausoleum. At this time Gilbert Burns, now drawing near the close of his life, when asked to visit Dumfries, wrote to Mr Grierson :—

Your obliging letter of the 27th I only received yesterday. I am much afraid it will not be in my power to visit Dumfries during the time the London marbleman is to be with you, though I much wish it ; not that I think I could be of any use in improving the marble, as I scarcely think it possible to make an artist produce the likeness of a person he has not seen, but it would certainly gratify me much to comply with the wishes of those who have taken so much trouble to do honour to my brother's memory. I trouble you with the enclosed to Mrs Burns, and beg you will get it immediately sent to her. If I do make out my visit to Dumfries at this time it will be on Thursday, the 2d Sept., and wish her to be aware of my coming, as I believe the coach arrives late at Dumfries. I will send and invite Dr Sibbald to accompany me if I find I can set out, or send what despatches with me he wishes if he do not think of journeying, which I rather doubt. I beg you will present Mrs B.'s and my assurances of kind regard to Mrs Grierson, and believe me to be ever,

GILBERT BURNS.

Grant's Braes, 31st August, 1819.

A large balance, continued Mr Wilson, was still due to Mr Turnerelli, and all the Committee did was to undertake to raise it if at all possible. Nothing further seems to have been paid except a sum of £150 remitted from Demerara. Letters down to 6th

April, 1821, passed between the parties, and in the end Mr Turnerelli apparently considered his claim totally bad, and ceased to write on the subject. These facts as to the price of the sculpture were totally different from those given in a leaderette of the *Dumfries Standard*, wherein it was stated that the sculpture was gifted to the community by Turnerelli. The Mausoleum itself, as well as the sculpture, had been the subject of much hostile criticism, and even to this day the discussion was periodically revived. Even "honest Allan" could not refrain from passing his judgment, and in a letter to Mr Grierson, of date 30th July, 1834, he speaks out boldly :—

I am grieved to find that my remarks on the Burns monument have given pain to a worthy gentleman and a lover of the muses. I agree with you that the design of the architecture is elegant, and may add further, the unity and harmony of the whole are much to my mind. My objection is that the structure wants that massive vigour of design and hardness of material which insure duration in this moist and stormy climate. The sculpture I most heartily and conscientiously dislike. It is ill conceived, and worse executed, and, indeed, the sentiment is beyond the power of sculpture to express. Who can carve an inspired or rather an inspiring mantle? It is but a bit of marble. The muse in the hand of Turnerelli was not likely to succeed in her task. It reminds one of that passage in Scripture—"And a certain woman threw a piece of a mill-stone on the head, &c." (The quotation is from Judges, c. 9, v. 53, and is—"And a certain woman cast a piece of a mill-stone upon Abimelech's head, and all to break his skull.") I am supported in my dislike by very high authorities. A few days ago Mr Wordsworth, the poet, wrote to me saying that he had been in the vale of the Nith, and had walked in the footsteps of Burns. "By-the-bye," he says, "what a sorry piece of sculpture is Burns' monument in Dumfries Churchyard. Monstrous in conception and clumsy in the execution, it is a disgrace to the memory of the poet." Chantrey had no chance for the monument—he was not one of the competitors—so I was not at all disappointed. Had it been confided to his hands, you would have had a statue for your money worth a couple of thousand pounds. I have had a drawing made of the monument—the architectural portion I mean—and it will be engraved for the concluding volume; nor will I fail to intimate to whom we owe the first monument raised by the gratitude of Scotland and to the memory of Burns. You did your best to have the poet honoured, and who can do more? I have likewise done my best, nor shall I be displeased should a worthier life be written or a better edition of his works published.

I have, however, no cause to repine at my success. There is a regular sale of five thousand copies of each volume of Burns' works, and

of the six thousand printed of the life only a few copies are unsold. Though I understand that my labours have not been quite acceptable to sundry persons in the vale of the Nith, it is otherwise with the rest of the country, and some of the first men in the island have written concerning the life and notes in terms of praise too flattering for me to mention. I am not much mortified at this reception in my native valley; so long as it is remembered that I wore an apron and wrought with a scabbling hammer in the Friars' Vennel, so long will my works not have "fair play;" but time renders justice to all, and the day is not distant when I shall either be forgotten altogether or be more honoured than at present on the banks of the Nith.

I am told that our friend Mr M'Diarmid has a life of Burns in progress. I am glad of this. He will set the world right in many important matters regarding the genius and fortunes of the poet. So solicitous was he, I have heard, about the truth, that he actually sat beside Mrs Burns with an interleaved copy of my life for two days questioning her till, to use her own words, she was both weary and ill-pleased about it. His love of truth on the part of our friend did not shorten, I trust, the life of the lady, though it seems to have embittered it. I observe that he says the true history of the poet's marriage has never yet been told. That is true, but can it be told with propriety? Should he desire to tell the whole truth, I can help him to three of the poet's letters on that very subject which have not been published, and which contain his sentiments on the matter.

I hear with some sorrow that the poet's sword and pistols, which he presented to Dr Maxwell, were sold at a sale of the latter for a mere trifle. This is not at all creditable to the admirers of Burns about Dumfries. I am trying to regain them, and I hope to succeed.

I beg you to accept my best thanks for the kind expressions contained in your letter regarding my edition of the poet. When I am next in Dumfries—and that will be soon—I shall find my way to Thornhill, without an invitation, and spend a day with one whom I remember with pleasure.

When I was a humble labourer in Dumfries, I looked up to you as one of those who loved literature, and I assure you time has rather strengthened than diminished this feeling.

ALLAN CUNNINGHAM.

Belgrave Place, 30th July, 1834.

The minute book, concluded Mr Wilson, contains no further information in regard to the cost of the Mausoleum and sculpture, although it appears that all charges against the Committee were duly advertised for and called in. Mr Grierson, the secretary, appears from a correspondence with Mr M'Diarmid in regard to a disputed subscription to have got his strong iron box robbed of the cash book, visitors' book, and other documents connected with the

Mausoleum when on a visit to the coast, and it is therefore impossible to tell from the documents at my command what amount was actually expended. The cost seems to have been well up to £2000, and I fear the verdict of the present day is that a very bad return has been received for the money expended.

Mr Wilson then alluded to the origin of the Burns Club in Dumfries. The Committee entrusted with the erection of the Mausoleum and their friends, he said, appeared to have celebrated the anniversary of the poet's birthday by dining in the King's Arms Hotel on 25th January, 1817. No dinner appeared to have taken place in 1818, but on 25th January, 1819, the event had been celebrated in the Globe Inn. At that meeting it was agreed to open a subscription for the purchase of a china punch bowl, to be used on all similar occasions, and the sum of £19 8s 6d was then subscribed in guineas and half-guineas. Accordingly a bowl was purchased, made by Spode of Staffordshire, of excellent workmanship, with elegant emblematic devices, capable of holding 3 gallons, and the original subscribers' names were placed thereon. A handsome silver punch spoon and three dozen glasses were also acquired, and along with the bowl produced at a meeting of subscribers on 18th January, 1820, and very much admired. The cost of the bowl was £15; of the spoon, £2 2s; and of the glasses £4 15s. It was then resolved in order to give effect to the celebration of the birthday of the bard to form the subscribers to the bowl into a society, to be named "The Burns Club of Dumfries," and Mr John Commelin was chosen president and Mr Grierson secretary, and minute regulations drawn up for an annual dinner. The newly-formed club dined in the King's Arms on 25th January following, about forty gentlemen being present, under the presidency of Mr Commelin, with Mr Syme as croupier. At this meeting Thomas White, mathematician, and James Hogg, the Ettrick Shepherd, were admitted honorary members. At the same meeting it was resolved as soon as the funds of the club would permit to purchase a *snuff mull*, and to have a portrait of the bard painted for the Club by an eminent artist. It had been arranged that Major W. Millar should preside at the dinner on 25th January, 1821, but in his absence Mr Commelin again presided, and Mr W. Gordon, jun., acted as croupier. This meeting took place in the Commercial Hotel, when thirty-seven sat down to dinner, which was excellent, the wines were good, the large china bowl was often filled with good whisky toddy, and the

company enjoyed the entertainment to a late hour. In the course of the evening Mr Gilbert Burns, the brother of the poet, and Mr Mayne, of the *Star* Office, London, a native of Dumfries, and author of the "Siller Gun," were created honorary members. Mr Gilfillan, a new member, and a rising artist, intimated that he would paint and present the Club with portraits of Burns and his widow, an intimation which was received with much pleasure. On 11th January, 1822, the Club met and appointed Mr John M'Diarmid president, and created as honorary members Robert Burns, Wm. Burns, and James Glencairn Burns, sons of the bard ; Sir Walter Scott, Thomas Campbell, James Montgomery, Allan Cunningham, William Tennant, Professor of Oriental Languages, and author of "Anster Fair," and George Thomson, Edinburgh.

Sir Walter Scott replied to the secretary :—

23d January, 1822.

I am honoured by the intimation that the Dumfries Burns Club have distinguished me by admitting me an honorary member, to which I am not otherwise entitled, excepting my sincere and heartfelt admiration of the great national poet, whose memory it is the purpose of the institution to celebrate.

I beg you will make my respectful thanks acceptable to the members.

WALTER SCOTT.

The original of this letter is framed and hung up in Dr Grierson's Museum, Thornhill, and it is believed to contain the first notice of Burns as the "Great National Poet." At the dinner on the 25th, James Hogg was present, and at the particular request of James Glencairn Burns "a strong bottle was filled with punch from the bowl to be sent out to him to India," the carriage of which to London cost 7s 8d. James Hogg appears to have sung several fine songs. Keith Douglas, M.P., and Thomas Moore were admitted honorary members, and Mr Gilfillan presented the portraits of the bard and his widow decorated with wreaths of laurel taken from the shrubbery at the poet's tomb. Letters were also read from James Glencairn Burns and Mr Mayne.

In 1823 it was agreed to ask General Dirom of Mount Annan to preside at the anniversary dinner. The General consented to preside, and he was elected president for the year, while Sir John Malcolm, Sir Pultney Malcolm, and others were enrolled honorary members.

Allan Cunningham, of date 14th January, 1823, writes to the secretary :

I will thank you to express my acknowledgments to the Burns Club of Dumfries for having elected me an honorary member. Such a distinction was as much beyond my hopes as it was unexpected and welcome. To obtain the notice of our native place is a pleasure which befalls few, and I have the proverbial intimation of its rarity to warrant me in thanking you with as much warmth as delicacy will allow me to use. To the most gifted it seems honour enough to be named with Burns, and I know not that such honour is enhanced by electing me along with some of our most inspired spirits. Some declaration of my faith in the illustrious subject of your meeting may be necessary. I am proud to name the name of Burns, and I recall his looks and dwell on my remembrance of his person with fondness and enthusiasm. In my youth, when poesy to me was an enchanted and sacred thing, I loved to wander in his haunts and muse on his strains everywhere so full of pathetic tenderness and sublime and moral emotion. I thought then, and I think now, that capricious and wayward as his musings often were—mingling the tender with the comic, and the sarcastic with the solemn—that all he said was above the mark of other men, that he shed a redeeming light on all he touched, and that whatever his eye glanced on rose into life and grace and stood consecrated and imperishable. I saw that his language was familiar yet rich, easy yet dignified, and that he touched on the most perilous themes with a skill so rare and felicitous that his good fortune seemed to unite with his good taste in keeping him buoyant above the mire of homeliness and vulgarity in which so many meaner spirits have wallowed. That in him the love of country, devotion, enthusiasm, love, happiness, and joy appear characterised by a brief and elegant simplicity at once so easy to him and unattainable to others that all those, and they were many, who sought to follow his track among themes of domestic life and homely joy wanted his power to dignify the humble, adorn the plain, and extract sweet and impassioned poetry from the daily occurrences of human life. All this and much more than this has been better expressed before, but I know on such a subject I will be indulged in a moderate degree of enthusiasm. I am not sure if you have safe accommodation in your Club Room for works of art. I ask this because I wish the Burns Club to accept from me the bust of a poet, one living and likely to live in his chivalrous poems and romantic stories as long, perhaps, as British literature shall live—the production, too, of the first sculptor of the Island—the bust of Sir Walter Scott by my friend Mr Chantrey. If such a thing can be accepted be so good as tell me, and I shall gladly confide its presentation to your hands.

ALLAN CUNNINGHAM.

Eccleston Street, Pimlico,
14th January, 1823.

The bust of Sir Walter Scott, by Chantrey, referred to in the above letter was duly despatched, and the donor again writes on December 25th, 1823 :—

Some ten or twelve days ago I forwarded to you by way of Leith the bust of Sir Walter Scott for the Burns Club of Dumfries. I hope by this time it has reached you in safety. You know much better than me how such things are introduced. You will therefore oblige me by presenting it in your own way at the next meeting. I trust you will have a large increase of members, and much mirth and eloquence. It was my wish to have written you earlier. I have long felt how much all owe to your discreet and active enthusiasm in other matters as well as those of song, and though slow in expressing it, I have not felt it the less sensibly. To render our native town distinguished, to make it, though less populous, as far known and famed as prouder cities, ought, and I trust has been, the wish of all her sons. For my own part, though living in a distant place, and out of the way too far to be with you in person, I feel not the less solicitude for the fame and name of Dumfries than those who have the happiness of dwelling in her streets. Humble and remote as I am, my best wishes are ever with you, and I love my native vale and district zealously to do it honour as the wisest or the proudest of its children. I am willing to think that I have, though in a far less degree, in the wish of him in whose honour you are so soon to assemble redesired, and was ever a desire more amply fulfilled for the sake of his country and the love he bore her—"To sing a song at least."

Remember me to Mr Macdiarmid.

ALLAN CUNNINGHAM.

London, 25th December, 1823.

The only further trace of the Burns Club he could produce was contained in the following letter from Sir Walter Scott, dated from Abbotsford, 29th December, 1831 :—

I am very much flattered with the invitation of the Burns Club of Dumfries to take their chair upon the 26th of January next, and were it in my power to do myself so great honour it would give me the most sincere satisfaction. But my official duty detains me in close attendance on the Court of Session during its sittings, besides which I am not now so equal as at a former part of my life either to winter-journeys or to social exertion. The severe illness to which I was subjected some years ago obliges me to observe great caution in these particulars.

I beg to express my sincere wishes for the conviviality of the meeting, and to express my most respectful thanks for the honour which the Club have conferred upon

WALTER SCOTT.

Abbotsford, 29th December, 1831.

4th of April, 1890.

Major BOWDEN, Vice-President, in the Chair.

New Member.—Mr John Thorburn Johnstone of Moffat.

Donations.—Annual Report of the Canadian Institute, 1888-9; Proceedings of the Society of Antiquaries of Scotland, 1888-9; and Mr J. J. Reid's paper on Mouswald and its Barons. Mr Scott Elliot presented a copy of Lees's Yorkshire Naturalists' Union, and botanical papers from Mr J. G. Baker, F.R.S., the author of them.

COMMUNICATIONS.

I. *The Flora and Fauna of Madagascar.* By G. F. SCOTT ELLIOT, B.Sc.

Nothing would seem to be easier than for a botanist to describe the flora of a tropical island, but in reality nothing is so hard as to give an account of so strange and outlandish a vegetation. The flora of Madagascar contains probably 6000 or 7000 species, of which 10 per cent. are endemic. Most of these special forms, moreover, are so strange and extraordinary that anything like a detailed description is impossible. They are in fact vegetable kangaroos. I shall simply try to describe the vegetation, or rather the different vegetations, as one sees them. The island consists of an enormous mass of granitic mountains rising to a height of 10,000 feet in isolated peaks, but usually forming an irregular tableland or mountainous plateau about 4000 feet above the sea level. The flanks of this tableland are covered with dense and luxuriant forest, which thus forms a belt all round the island and limits the bare upland plateaux of the centre. Between this forest and the sea is a rather wide stretch of sandy plains broken by lagoons, brackish and freshwater lakes, and intersected in all directions by deep and broad rivers.

The flora of this sandy littoral is very monotonous. There is usually a stretch of short turf with *Phaseolus*, *Ipomæa* *Pes Capræ* and other plants with long trailing runners rooting at intervals. Our English sandpiper is common along the shore, but the commonest creature is a small red crab, of which myriads are always running up and down just outside the reach of the waves. It is a ferocious little animal, and snaps its extremely small claws whenever one approaches, while gradually sidling away into the water. There are in places very dense brushwood, formed chiefly

by *Lobelia Scævola* and certain *Rubiaceæ*, and this is at times broken by clumps of *Casuarina* trees and *Pandanus*. The former is a favourite perching place for the guinea-fowl, which are found in large numbers along the coast.

Every now and then one has to take to a canoe and travel up some sluggish river. The banks of these rivers are fringed by groups of Traveller's tree, Baobab and other trees, not differing so much from our own forms in appearance. A gigantic *Arum* with leaves nearly 4 feet long is often arranged in long rows along the margins. The beautiful blue water lily and the yellow *Limnanthemum* rest on the surface of the water, and occasionally one finds the latticed leaves of the *Ouvirandra*, one of the curiosities of the island. The lovely little blue and red kingfisher may often be seen perched on the bushes, and occasionally darting off after some incautious fish. Looking over the sides of the canoe one is astonished at the quantity of fish that inhabit these waters, and this explains the presence of crocodiles, which in such places are extremely numerous. They are not really often seen, but one hears frequently of oxen caught by the crocodile and dragged off for assimilation, or of some unfortunate woman gathering rushes who has been seized and disappeared for ever. Occasionally one rows under a group of flying foxes hanging by their tails. They turn their foxlike heads downward, expostulate vigorously, then unhook themselves and fly off with a strong steady flight. Such a stream ends in a wide lake or reedy lagoon, chiefly formed of *Cyperus æqualis*. Along its sides grow huge grasses 10 or 12 feet high, and on a withered tree one often sees a cormorant perched with its bill in the air and looking sideways downwards at the canoe with a peculiarly leery expression. Such places are the chosen haunts of the thirteen or so species of ducks, some as big as a small goose, others not larger than a quail. Herons of all shapes and colours abound, and other kinds of waterfowl are quite innumerable. Occasionally, though rarely, one sees a flock of flamingoes drawn up side by side, shoulder to shoulder, in a regular military line. The pure white line which their bodies form is visible miles away. Near at hand one sees the bright scarlet wing coverts which form a belt halfway down the white uniform. Such lakes and sandy stretches form a large portion of the coast, but one soon begins to leave them and mount the outlying flanks of the hills. These form a series of gentle slopes and valleys before one enters the forest proper. This is the home of the Traveller's tree, one of

the most striking plants in existence. It has a stem 8 or 10 feet high and about 20 leaves spreading out like a fan, each of which is about 10 feet long. The bright white flowers grow on a sort of cone at the bases of the leaves, and the honey is busily visited by a beautiful little sunbird with a scarlet and blue breast. The seeds are the great mainstay, moreover, of the rather dingy slate-coloured Malagash Parrot, which frequents them in great numbers. This tree is of the greatest use to the natives, whose houses are built almost entirely with its leaves. The water, however, obtained by piercing the leaf bases is lukewarm and of a very vegetable taste. It is also here that the Rofia palm, whose split leaves are so much used by gardeners, grows. It is also here that the Bamboos thrive, with their enormous gracefully curved leaves, like a gigantic bunch of ostrich feathers, of a delicate yellowish green. The extraordinary *Nepenthes*, moreover, is not uncommon on these slopes. The grass clothing these gentle rises is very harsh and useless, and there is an abundance of the common bracken everywhere.

Soon, however, one enters the true forest, which covers three or four ranges of parallel mountain chains. It is usually not very beautiful. The path is only about two feet wide, and is walled in on either side by a sort of gigantic hedge 70 or 80 feet high. This is formed of dense undergrowth and huge trees, from the lower branches of which hang the enormous foliage masses of the climbing plants. The aim of Nature seems to have been to fill every available space with leaves. There are no glades and none of those agreeable vistas so common in English woods. Though the appearance of these trees is not really very striking, they are all of entirely different kinds. One here meets huge *Compositæ*, the *Vernonias*, with enormous umbels of purple heads; such *Leguminosæ* as *Neobaronia* with fleshy, flattened, leafless branches. *Brexia*, a tree 80 feet high, whose nearest relative in our country is the Saxifrage; *Weinmannia* is also a Saxifrage. Many of the largest trees belong to *Euphorbiacæ*, such as the genus *Euphorbia* itself and *Croton*. There is also a huge forest tree, *Wormia*, a near ally of *Ranunculacæ*. Few of these trees are at all beautiful; perhaps the bright pink flowers of *Ixora* or *Colea* are the handsomest, and one of these in full blossom is very beautiful indeed. The creepers are chiefly objectionably spiny *Asparaguses* or *Smilax*, but their number and variety is enormous. The undergrowth of *Plectranthus*, *Balsams*, &c., is often very

beautiful, but it is on dead trunks and decaying stumps that one sees the finest plants of all: *Bolbophyllums*, *Angræcum superbe* with its long spikes, 18 inches long, densely covered with huge white flowers and *A. sesquipedale* with its enormous spur. Ferns of all kinds abound; tree-ferns 20 feet high; and in the deeper denser parts huge quantities of *Hymenophyllum*, as well as many of our common forms. The silence in these huge forests is sometimes almost oppressive. Almost the only animals are the different kinds of lemurs, whose shrill whistling bark may occasionally be heard. Different species are adapted to play the parts of monkeys, squirrels, dormice, &c., none of which exist here. The larger kinds live in large bands flying from tree to tree, and feed on small birds, fruit, &c. Others live in hollows regularly hibernating, and to do this store up their winter food in their tails, which become extraordinarily fat and fleshy. Here the wild boar, really a *Babiroussa*, spends most of his time. He wakes up towards evening, and spends the night wandering about feeding on the *pommejacot* (*Imbricaria*). Sometimes one comes on huge furrows made by him when ploughing up the Lily bulbs, *Dioscorea*, &c. Sometimes he digs up the unfortunate *Tenrec*, a kind of hedgehog which hibernates below ground, and eats him, but his most favoured morsel is a snake. He begins at the tail and eats up the snake to the head, which he always leaves untouched. Towards morning he retires to a shady spot, and there makes a comfortable bed, covering himself with dead leaves and grass, where he slumbers till the evening. The only important carnivorous mammals are insectivoræ, the largest being the *Fouche*, a non-descript mastiff-like creature which one seldom sees. The whole of the animals are far less specialised structurally than those of the continent, while in habit they seemed quite as distinct. Of birds the handsomest are the *Couas*, with very beautiful bluish plumage; there are also hoopoes; several kinds of pigeons, one of which has a sort of whining bark very much like a small terrier; a peculiar black starling also lives in flocks, flying from tree to tree. A bird called the "Tolo," a kind of cuckoo with an absurdly long tail, is very common; it is very stupid, and never seems to realise that its tail can be seen when once it has concealed its head. Still, in spite of these exceptions, it is really insects, and especially butterflies, which give a little brightness and colour to the forest. Fifty or sixty brilliant blue and black butterflies fluttering above a little stream by the path are really a wonderful sight, and Red

Admirals, pure white Papilios, and Acræas with bright red spots on their wings, are all very common in the darker places. Sometimes one sees a millipede about 10 inches long, with hundreds of twinkling red feet crawling over the path, and a very large wood-louse, which rolls into a ball about an inch in diameter, is very common. But the insects are a study in themselves in Madagascar. When one emerges from the forest into the interior, the difference is extraordinary. As far as the eye can reach, there is nothing but range after range of bleak granite hills covered with a uniform grey grass broken by low scrubby perennials. Only small bushes with heath-like leaves seem able to live on the soil, which is a hard red clay, the debris of the granitic and gneissose rocks. The flowers are usually very inconspicuous, and it is most remarkable to find Rubiaceæ such as *Anthospermum*, *Leguminosæ* e.g. *Indigofera*, *Hypericums*, *Stachys*, *Philippias*, &c, all taking the same appearance. There is even an extraordinary Monocotyledon which has done its best to become something of the same kind—*Vellosia*. Where there is more water the flowers are more beautiful, and it is in such places that one finds *Disas* and *Habenarias* with long stalks and bright pink and white flowers, or that most beautiful Gentian *Tachiadenus* with a corolla 4 inches long, and the handsome shrubby *Impatiens* forms; but it is impossible to do justice to these flowers in such a paper as this.

The main features of the flora are, however, easy to understand. There is a certain number of seaside plants usually the same as those found along the Eastern Coast of Africa. The flanks of the mountains are covered with forest, and this flora shows most affinity with the forest plants of the East African Coast, while the bare steppe-like highlands of the interior are covered with plants which show distinct relationship with the similar grassy plateaux of the Transvaal and the Shiré Highlands.

II. *Annan: Its Historical and Literary Associations.*

By Mr FRANK MILLER.

Mr Miller said the town which he had been asked to describe was interesting to every student of Scottish history as one of the famous old border burghs. Owing to its geographical position, it was sadly exposed to the fury of invaders during the long-continued wars with England; and again and again it was the scene of desperate conflict. When at length the union of the crowns secured a permanent peace, it was universally acknowledged that

the exertions of the stout burgesses of Annan had proved of the utmost value in the struggle for the maintenance of the rights of the little kingdom of Scotland. Not only was the burgh renowned in history ; it was rich in association with some of the most illustrious of modern Scotchmen. The greatest lyrical poet the British Isles have produced, one of the most intrepid of African explorers, a pulpit orator of unique power and spiritual elevation, and the deepest and most earnest thinker of our time had all been more or less closely connected with it. As the town in which Irving was born, and in which Carlyle received his education, Annan would never cease to be regarded with interest.

Having made a brief reference to the churchyard, and quoted several of the more curious epitaphs, Mr Miller proceeded : Annan Castle, the site of which has so long been occupied by the churchyard, was erected at least a hundred years before the War of Independence for the protection of the town, which, as references in various ancient documents show, was even at that early period a place of some importance. In the year 1300 the Castle was repaired by Robert the Bruce, whose ancestors had obtained the whole of Annandale in fief. A stone from the building, with Bruce's name and the date 1300 inscribed on it, was seen by Pennant "in the wall of a gentleman's garden," when he visited the town in 1769. It is now at Bideford, in Devon, from which, let us hope, it will one day be brought back to Annan. The Castle is associated with not a few stirring events in Scottish history. Of these perhaps the most memorable is the defeat of Edward Baliol by Lord Archibald Douglas in 1332. Shortly after his coronation at Scone Baliol gained possession of the fortress, and commanded the barons of Scotland to repair to it and do him homage. His movements, however, were carefully watched by Douglas, who, at the head of one thousand horsemen, rode hastily from Moffat, and falling upon the town and castle at midnight, routed the forces of the usurper with much slaughter. Baliol lost his brother Henry and the most distinguished of his English followers in the action, and only saved his own life by fleeing precipitately to Carlisle. During the long wars with England the Castle was frequently captured and laid in ruins. As the chief stronghold of the town which was the key to the West of Scotland, it could not be abandoned to destruction ; and after demolition by the foe it was always speedily rebuilt. Eventually the pious but poverty-stricken burgesses obtained permission from James VI. either to

convert it into a place of worship or use its stones to build one. Though its Castle was the main defence of Annan in time of war, the church, which stood near to it, was also a place of strength, the tower being fortified. The destruction of "Annan Steeple" was the chief object of an English invasion in September, 1547. At the head of 2500 men, "whereof 500 were Scotsmen that served the King," Lord Wharton advanced to the attack, planting his siege train on the slope known as Battery Brae. The defenders were ably commanded by an officer named Lyon and by the Master of Maxwell, and the Lairds of Johnston and Cockpool. They did not exceed a hundred in number, yet for eight hours the unequal struggle was maintained, the heroic men of Annan hurling defiance at the foe—

" Till forty of the poor hundred were slain,
And half of the rest of them maimed for life ! "

The battered church after its capture was completely destroyed, being blown up with gunpowder. "This done," writes the old historian, "the English sacked and burnt the town, and left not a stone standing, for it had ever been a right noisome neighbour to England. The Englishmen had conceived such a spite to it that if they saw but a piece of timber remaining unburnt they would cut the same in pieces."

Near to the brae from which on that far-off September morning the invaders' guns poured their deadly discharge stands "The Moat," a long old-fashioned house, guarded by spreading elms and beeches. In the midst of the grounds, which stretch down to the holm, is a small tree-crowned height—one of the artificial eminences so common in Annandale. The "Moat Hill" is generally supposed to have been raised in early times as a spot on which to assemble for the administration of justice, but its origin is really wrapt in mystery. The Moat for a few months in 1808 was the residence of the Rev. James Grahame, author of "The Sabbath," who married an Annan lady, a daughter of Richard Grahame, town clerk. In his charming retreat the poet wrote "The British Georgics," gaining fresh inspiration from the old-world garden and the little wildernesses of tree and shrub. Only a Virgil can treat satisfactorily such a subject as "Husbandry," but Grahame's work has merit, and in many of the lines the influence of local scenery can be traced.

Proceeding, in his description of Annan, to the Town Hall, a handsome modern erection, Mr Miller gave some of the results of

his examination of the records preserved in that building. These documents include the Council Minutes from 1678 to the present year, and a number of important "dispositions." The lecturer expressed his surprise that the older Council records, from which much curious information could be gleaned, had never been transcribed and published. Referring to the state of the burgh two hundred years ago, he said: The poverty of Annan in the closing years of the seventeenth century seems to have been great. One privilege, that of collecting customs, was enjoyed by the town, having been granted by Charles II. to recompense the burghers for their losses during the civil wars which raged in the time of his father. A ferry boat on the river was "pairte of the common good," but the rent yielded by it seldom amounted to 40 pounds Scots per annum. The appearance of the town shewed its insignificance. The houses were small and of rude construction, while the church was a plain building without a steeple. The sanitary condition of the burgh was unsatisfactory, though the magistrates now and again issued orders for the cleansing of the street, and fined persons found guilty of indulging in practices detrimental to the public health. The inhabitants being "sudden and fierce in quarrel," fights and aggravated assaults were common. In 1686 the schoolmaster was fined ten pounds Scots for fighting, and in 1700 the town clerk was condemned to pay fifty pounds Scots "for a blood and ryott committed by him upon Robert Johnstone, son to the deceased David Johnstone, sometime bailie." Women not infrequently figured in assault cases, "ryving of hair" being one of the favourite amusements of the gentler sex. The good old sport of tossing in a blanket was not unknown in Annan, as is shown by an entry, dated 1694, recording the infliction of a fine upon two men "for raising of an blanket and throwing of David Johnstone and Adam Johnstone to the ground." If quarrelsome, the people were comparatively honest. At times a goose was stolen from the common, or peas and beans were taken from a neighbour's garden, but few serious cases of theft occurred. Offences against property were punished with more than the usual severity. In 1701 a servant maid, convicted of complicity in a theft of barley from her master's barn, "was ordained to be put in the stocks on Monday morning, and to continue there during the magistrates' and Council's pleasure." The court, considering it probable that the girl's master would prove tender-hearted and refuse to give her up on the awful Monday morning, wisely appended to the sentence

these words, "and the said John is ordained to be imprisoned if he fail to produce her." Amongst other offences with suitable penalties attached were, "saying that the magistrates did not give true judgment," "building of peat stacks upon the High Town Street," "raising and pulling up of march stones," and "cutting and carrying away of wood" from plantations in the neighbourhood. Persons were frequently fined for "irregular marriage," and on one occasion a man was prosecuted for "resetting the Egyptians and also eating and drinking with them"—in other words, for sheltering gypsy outlaws and fraternising with them.

Passing from the picture of life in the burgh two centuries ago as reflected in the Council records, Mr Miller alluded to the connection of Carlyle with Annan, mentioning that the Old Academy, to which he was taken by his father on that "red sunny Whitsuntide morning" in 1806, has long been the residence of Mr Batty, who for many years was Chief Magistrate of the burgh. The house is large and dark—one of the buildings which Dorothy Wordsworth had in her observant eye when she penned her singularly graphic description of Annan. Carlyle's "doleful and hateful school life" lasted till 1810, when he was sent to Edinburgh University. Four years later he returned to Annan, having obtained by competition the post of teacher of mathematics in the Academy. He remained in the town till 1816, boarding with Mr Glen, the burgher minister, in the house in Ednam Street now occupied as the United Presbyterian manse.

With the name of Carlyle will always be associated that of Edward Irving, who was born in 1792, in a house in Butts Street. Gavin Irving, the father of the preacher, was a tanner, carrying on his trade in a yard near to his dwelling-house. He held the office of bailie when the election celebrated in Burns's "There were five carlins in the south" took place. His wife, Mary Lowther, was a native of the parish of Dornock, where her father owned a piece of land. She was a handsome woman, with brilliant black eyes, and her energy and force of character won the admiration of all who came in contact with her. Irving received his education at Annan Academy, of which the talented Dalgliesh was head master. In a few sentences the lecturer outlined Irving's meteoric career, and remarked that not a few of his townsmen would still tell with strange awe how they witnessed in their youth his solemn deposition in Annan Parish Church and listened to the cry of anguish which burst from his lips when his opinions were condemned.

Another celebrated man, Hugh Clapperton, the African explorer, was born in Butts Street, in 1788. His father (a native of Lochmaben) was the only surgeon resident in the healthy town. Miss Clapperton, the explorer's cousin, had kindly allowed the exhibition to the Society of Dr Clapperton's ticket of admission as a burghess of the royal burgh.

Annan, it was mentioned, was also the birthplace of Thomas Blacklock, the blind poet-minister, author of the beautiful sixteenth paraphrase; but the house in which he was born has long since disappeared—its very site has been unknown for at least fifty years.

Towards the close of his troubled life Robert Burns had often occasion to visit the town, which was then the home of numerous smugglers, a large contraband trade being carried on with the Isle of Man. "The Deil's Awa' wi' the Exciseman" was written in a house in High Street, not on the shore of the Solway, as stated by Chambers on the authority of Lockhart. The poem, immediately after composition, was read by Burns to a large company assembled in the house. Mr Miller explained that this fact was made known to him by Dr Williamson, whose father and grandfather were both included in the poet's audience.

Another building in High Street was worthy of notice. In December, 1745, the retreating army of Prince Charles Edward bivouacked at Annan, and "Scotland's Heir" found shelter in the Buck Hotel. The burghesses were prudent enough not to quarrel with the Highlanders; but over their "white port" they breathed devout wishes for the speedy destruction of the Prince and all his followers. During the Rebellion the Magistrates and Council met in the public-houses almost daily to discuss the movements of the enemy. Much liquor was, of course, consumed at the expense of the burgh, and some of the publicans' bills remained unpaid until 1749. A quotation from the minute of the Council meeting at which payment of the outstanding debts was authorised may be acceptable.

Find upon examination of the said accompts that the greatest part of the articles therein stated have been contracted by some of the Councillors when met together for intelligence and advice about their common safety in the years 1745 and 1746, when the country was in the utmost confusion by the late unnatural rebellion. . . . Do declare that this indulgence is only on account of the late troubles, and that this act shall be no precedent to invalidate or infringe the foresaid act of the

Town Council on the 7th of December, 1740, regulating the extent and method of payment of the burgh's expenses in public-houses.

2nd of May, 1890.

Major BOWDEN in the Chair.

New Member.—On the motion of the Secretary Mr J. G. Baker, F.R.S., curator of the Kew Botanical Gardens, was elected an honorary member.

Donations.—Proceedings of the Natural History Society of Glasgow, 1887-9; Proceedings of the Nova Scotian Institute of Natural Science, 1888-9; Annals of the New York Academy of Sciences; the Seventh Annual Report for 1885-6 of the United States Geological Survey.

Mr Scott Elliot made a report of his preliminary efforts in procuring assistants for forming a *Flora* of the district, and the formation of an Herbarium for Dumfriesshire and Galloway.

The Dinwiddie Library.

The Secretary read the following letter, received through Mr Robert Stoba, Solicitor, from Mr Robert Dinwiddie, of New York.

BRAE SIDE, SCARBOROUGH-ON-HUDSON,
NEW YORK, 1st March, 1890.

TO DR EDWARD J. CHINNOCK,
Secretary of the Dumfriesshire and Galloway Natural
History and Antiquarian Society,
Dumfries, Scotland.

SIR,

Mr Robert Stoba has kindly consented to hand you with this letter two cases of books as per enclosed list, formerly the property of my late father, Robert Dinwiddie, a native of Dumfries, and, as I believe, a member of your Society. These books were bequeathed in his will to me, but I have concluded to offer them to your Society in the hope that they may prove of value to its members in many ways. I trust that they may prove acceptable to your Society, and find a permanent home among the fellow-townsmen of my father, and I desire that they shall be added to your library of reference, and be known as the "Robert Dinwiddie Library," and held subject to such regulations that, while promoting to the utmost usefulness to all members of your Society, they will still be protected as far as is possible from loss, destruction, or mutilation. In presenting these books to

your Society, I do so believing that such disposition would have been agreeable to my father's wishes could he have been consulted, and I am glad to be the medium of tendering you this donation to your library.

I have the honour to be,

Yours very truly,

ROBERT DINWIDDIE.

The Secretary was directed to write thanking the donor for his valuable present.

Mr James Lennox, F.S.A. (the Librarian) read the following paper entitled "The Dinwiddie Library, and how it came to this Society" :—

The original owner, Mr Robert Dinwiddie, was born in Dumfries, 23d July, 1811, and died at New York, 12th July, 1888. He was the third son of Mr William Dinwiddie, hosier. Commencing life in the Dumfries branch of the Commercial Bank of Scotland, he rose to be teller. He emigrated to America in 1835, and joined the house of Brown Brothers, merchants and bankers in New York ; shortly afterwards entering the employment of J. Laurie & Co., commission merchants, in which business he succeeded them, being left by them to administer funds for St. Luke's and the Presbyterian Hospital in connection with the St. Andrew's Society of New York.

He retired from business in 1883, and then devoted more of his time to scientific pursuits, although he had always been a worker both in archæology and botany. His attainments in these had been recognised, as he was fifteen years a member of the New York Academy of Sciences and an active member of the Microscopical Society up to the day of his death. Some years ago he gifted the whole of his extensive scientific library to the New York Academy of Sciences, and what is now under our own roof has been collected since that date, being more valuable as they are more recent.

He visited this country a few years ago, being here when the Cryptogamic Society were in Dumfries, and during his stay he was admitted a life member of this Society. The history of the New York Academy of Science contains a portrait of him, but no mention appears in the text, as it was with great difficulty that they persuaded him to sit for this plate, but on no account would he allow anything to be said of him.

The books consist of 229 bound volumes and 22 unbound. They embrace :—24 Microscopic, 5 Medicine, 8 Geology, 24

Natural History, 38 Botany, 13 Natural Philosophy, 4 Meteorology, 6 Travels, 43 Reports of Societies, and 57 Magazines, &c.

To go fully into these would make a lengthy paper, as many of these subjects can be sub-divided into very many special studies. Amongst them we have books on fresh water plants, salt water plants, shells and fish, cryptogamic botany and flora, &c. The books are, in the main, English; many of them are elegantly bound in half morocco and half calf, which will add much to their usefulness in handling.

COMMUNICATIONS.

I. *Observations of the Temperature of the Nith and its Estuary for the year ending 15th April, 1890.*

By Rev. WM. ANDSON.

The observations were taken at the instance of a committee of the British Association, which was appointed to obtain observations of the temperature of rivers, estuaries, and lakes over the United Kingdom as compared with that of the air, and as modified by the direction and force of the wind, the state of the weather, &c., the chief object being to ascertain the seasonal variations. The observations at Dumfries were taken throughout the twelve months. Mr James Lewis took the observations of the estuary at Kingholm Quay, from 25th June to 21st March, and observations were begun at later dates in the River Dee by Rev. W. I. Gordon, of Tongland, and in the Dee estuary by Mr Macdonald, lighthouse keeper, Little Ross. These, he understood, were still being carried on, but as the year was not completed they could not be reported upon. The Nith observations, he explained, were taken at the Dumfries boathouse, where there was an average depth of more than three feet. In consequence of the damming of the water by the weir below the Old Bridge the river at this point never fell very low; he had never seen the depth less than $2\frac{1}{2}$ feet. On two occasions of heavy flood even the parapet wall was overflowed—once in the beginning of November, when the depth was estimated to have been fully ten feet, towards midnight on the 1st; and again on 25th January, after heavy rain and the melting of snow on the high grounds, with a south-west gale, when the depth of 9 feet was registered at the gauge on the Old Bridge. The hour of observation was at or near noon. The following table shewed the mean temperature of the air and water for each month

separately, along with the state of the river or the mean depth as registered at the gauge (which was erected in July), viz. :—

	<i>Air.</i>	<i>Water.</i>	<i>Dif.</i>	<i>State of River.</i>
Corrected Means for April .	51·3°	45·8°	5·5°	Average.
„ May....	60·5°	56·6°	3·9°	Under average.
„ June ...	65·8°	63°	2·8°	Low and very low.
„ July....	63·3°	60·3°	3°	Very low till 10th, then above avg.
				<i>Mean Depth at Gauge—</i>
„ Aug. ...	62·3°	57·5°	4·8°	5 feet.
„ Sept....	59·7°	53·1°	6·6°	4·6 „
„ Oct.	49·6°	45°	4·6°	5·1 „
„ Nov. ...	45·6°	43·1°	2·5°	5·2 „
„ Dec....	40·2°	38·2°	2°	5·5 „
„ Jan. .	44·4°	40·5°	3·9°	6 „
„ Feb. ...	42·8°	38·1°	4·7°	4·8 „
„ Mar. ..	48·5°	41·1°	7·4°	4·9 „
	<hr/>	<hr/>		
	634°	582·3°		
	<hr/>	<hr/>		
Means for whole year	52·8°	48·5°		
	<hr/>	<hr/>		
	48·5°			

Mean difference between air
and water for year 4·3°

From this table it will be seen that the highest monthly mean temperature of the air for the year was in June, when it was 65·8°, the mean temperature of the water for the same month being 63°, also the highest mean for the year. The lowest was in December, when that of the air was 40·2°—water, 38·2°; but the mean temperature of February for the water was a fraction lower than this, viz., 38·1°, while that of the air was 42·8°. Range for monthly means—air, 65·8°; water, 38·1°—27·7°.

The highest single reading for the air was on 31st July ... 76°

The lowest single reading for the air was December 31°

Extreme range for air 45°

Highest single reading for water was on 4th July 66·6°

Lowest single reading for water was on 13th February 32°

Extreme range for water 34·6°

The months in which the mean monthly temperature of the air and water most nearly approximated were: December, when the difference was only 2° (*i.e.*, of air above water); November, 2·5°; June, 2·8°; and July, 3°. Those in which the temperature varied

most were : March, 7.4° ; September, 6.6° ; and April, 5.5° . Mean difference for whole year, 4.3° . Thus it will be seen that the months in which the temperatures of the air and water most nearly approximated were those in which the day was at the shortest and the longest. In other words, there were two maxima and two minima of difference between the temperatures of the air and water, the former occurring in the months of March and September, the equinoctial months ; and the latter in December and June, the months of the winter and summer solstice. The former fact is easily explained, but it is rather a curious circumstance that the same thing should hold good of the month in which the sun is longest above the horizon, and most vertical. The explanation, I have no doubt, is that in the latter part of June and the first part of July, when there was a period of drought and warm weather, which lasted more than three weeks, the river fell to its lowest level, and the current was very sluggish. Hence the water became more heated than in ordinary circumstances, and its temperature more nearly approached that of the air.

Though as a rule the temperature of the air was higher than that of the water, there were a good many exceptions to this rule, especially in the months of May, June, July, November, and December. Thus there were five days in May in which this occurred, six in June, and four in July, with an aggregate excess in the temperature of the water of 37° . In November and December there were also 15 days with an aggregate excess of 30.4° , the greatest number being in December, viz., 10 days, while on other two days of that month the temperature of air and water was equal. The conditions under which this state of things was observed were, as a rule, in summer, when the temperature was lowered by cloudy and wet or dull and foggy weather, or by the prevalence of cold winds ; and, in winter, when the conditions were similar, or when frost set in. The most extreme difference was observed on July 7th, when the reading of the air temperature was 53° , and that of the water 65° —a difference of 12° . This was at the close of the period of drought before alluded to. The greatest excess in the temperature of the air above that of the water occurred in March, when on 16 days it was higher by more than 7° , ranging from 7° to 14.5° ; and the next in September, in which month there were 13 days in which the difference exceeded 7° , ranging from 7° to 13.2° . On these occasions the weather was

for the most part bright and sunny, or if cloudy or rainy, very mild, with south or south-west winds.

I have also to submit a table shewing the mean monthly temperatures of the air and water of the estuary of the Nith at Kingholm Quay, and taken with great regularity by Mr James Lewis, for a period of about nine months, from 25th June, 1889, to 21st March, 1890. The hours of observation necessarily varied, because the proper temperature of the estuary could be obtained only when the tide was up. For the most part they were taken between the hours of 9 A.M. and 4 P.M., though sometimes a little earlier and sometimes a little later.

	<i>Air.</i>	<i>Water.</i>	<i>Difference.</i>
	<i>Means.</i>		
From 25th June to 31st July	61·3	61·5	+0·2°
„ 1st to 31st August	59	56·9	-2·1
„ 1st to 30th September	56·2	54·4	-1·8
„ 1st to 31st October	45·5	45·8	+0·3
„ 1st to 30th November	45·8	41·6	-4·2
„ 1st to 14th December	38·3	36·8	-1·5
„ 1st to 31st January	41·1	39·5	-1·6
„ 1st to 28th February	40	37·4	-2·6
„ 1st to 21st March	42·7	40·4	-2·3
	—	—	
Sums	429·9	414·3	Mean
	—	—	Difference.
Means	47·7	46	1·7

From this table it will be seen that for the period from 25th June to 31st July the mean temperature of the estuary was a fraction of a degree higher than that of the air, and the same thing occurred again in October. In all the other months it was lower, but not to the same extent as in the case of the river temperature. Taking the whole period during which observations have been made, the mean temperature of the air was 47·7° and of the water 46°, giving a mean difference of only 1·7°, instead of 4·3° as in the case of the river. This result might have been somewhat modified if the observations had been extended over the whole year instead of nine months, but not, I think, to any great extent, there being an obvious reason why the temperature of the estuary should be higher than that of the river as compared with that of the air, viz., the fact that when the tide rises it passes over the extensive tracts of sand which in the Solway Firth are left bare by the receding tide, and in sunny days become heated by the sun, to which it may be added that the influence of the Gulf Stream must tell in

some degree upon the temperature of the tidal water, while that of the river is wholly unaffected by it. It may perhaps be asked why the mean annual temperature of the air in my observations should be 52.5° , while in those of Mr Lewis it is only 47.7° , and the mean temperature of the water 48.5° , as compared with 46° . But this admits of an obvious explanation. For one thing, there were no observations taken by Mr Lewis in April, May, and the greater part of June, while mine included these months, and another thing to be taken into account is that my observations were taken invariably about noon, when the heat of the day was approaching its maximum, while those of Mr Lewis were taken at all hours when the tide was up.

I regret that I have not been able to procure a sufficiently extended number of observations of the temperature of Lochrutton Loch to be of much value, but by the kindness of Mr Beck and Mr Lindsay I got observations made from the 8th to 19th August, and from 13th September to 1st October, with the following results :

	<i>Means.</i>		
	<i>Air.</i>	<i>Water.</i>	<i>Difference.</i>
From 8th to 19th August	58.3	61.1	+2.8
,, 13th September to 1st October ...	54.3	55.2	+0.9

From this we may probably infer that during at least the autumn and winter months, and possibly in summer also, the temperature of the Loch is, as a rule, in excess of that of the air. But the observations are too limited in number to warrant any decided conclusion being founded upon them.

II. *Seaweeds.* By Mr JOSEPH WILSON (late Secretary).

Seaweeds form by far the largest section of the Algæ, which is one of the three great classes into which the thallogamous plants are divided. They are most abundant in the tropics, and many thousand species have been found in the waters surrounding the British Isles. These aquatic plants vary very much in size, form, texture, and colour. Some species are entire and coriaceous, others branched and filamentous ; some are flat, with or without a midrib ; others are round, and in some instances measure several hundred feet in length. One characteristic feature of all is that they have no true roots, but absorb their food instead from the medium in which they exist.

The seaweeds found along the shores of Dumfriesshire and Galloway have not, as far as I am aware, been catalogued, and although they are not so varied or plentiful as those on more exposed coasts they form a portion of the flora of the district and should not be overlooked.

Seaweeds are found in greater abundance on the rocky and exposed coasts, in the pools of water among the rocks, and growing in the water when the tide is at the ebb. As there are no rocks along the coast of Dumfriesshire, but sand banks instead, and the distance to the water's edge when the tide is out considerable, only a few specimens can be obtained growing in the natural state, and not many are to be gathered when washed ashore by storms. The Galloway coast differs from that of Dumfriesshire, for there are rocks at Douglas Hall, Colvend, and further westward, but these are either of the Silurian or Igneous formations, and are not so favourable to the growth of seaweeds as the softer rocks.

In order to investigate the seaweeds of the district it is necessary to examine the rocks or other structures where they grow at all seasons of the year, and every opportunity should be taken to collect specimens washed ashore by spring tides and storms. Under these circumstances the making of a complete list of seaweeds is no easy task, and as the spare time at my disposal was limited, I have only been so fortunate as to secure some of the commoner species, many of which I now exhibit and briefly notice.

SUB-CLASS I.—*Melanospermeæ*.—The seaweeds in this sub-class are of an olive colour and grow in abundance on every shore, except one genus—*Sargassum*—which covers immense tracts of the Atlantic in the tropics. This sub-class is divided into six orders, which we shall briefly notice.

Fucaceæ.—All the plants in this order are dark olive and have the peculiarity of turning black when dry. The following are frequently met with: *Halidrys Siligiosa*, growing in rocky pools, and at low water mark on the rocks at Douglas Hall and the Galloway coast. *Fucus vesiculosus*, common sea-wrack, grows on every stone washed by the tide.

F. Serratus, common, is distinguished by the serrate fronds, no air vessels, and grows in large patches on the rocks between tide marks. *F. Nodosus*, also common, generally washed ashore at Glencaple and Ruthwell by the tide. A number of parasitical species attach themselves to this plant. *F. Canaliculatus*, a small

plant scarcely four inches in length, grows in tufts on rocks between tide marks at Douglas Hall and Colvend. *F. Ceranoides* at the mouth of Nith near Glencaple.

Himanthalia Lorea, or sea thongs, grows on the rocky shores at low water mark and is frequently washed ashore with spring tides. *Desmarestia aculeata* is a representative of the second order—*Sporochnaceæ*—occasionally met with growing in pools on the Colvend coast. Order III.—*Laminariaceæ* is represented by *Alaria esculenta*, occasionally washed ashore in winter; *Laminaria digitata* and *L. Saccharina*, frequently met with along the Caerlaverock shore; and also *Chorda filum* in winter and spring. The plants in the next three orders grow attached to rocks at low water, or in tidal pools, but I have only been able to distinguish one genus—*Dictyosiphon*—from Ruthwell.

SUB-CLASS II.—*Rhodosperrmeæ*.—The plants in this sub-class differ in texture and colour, and the frond is more or less jointed, as you will notice from the specimens exhibited. *Odonthalia dentata*, frequently met with on the coasts of Fife, should be found at Colvend. *Polysiphonia nigrescens*, *P. fastigiata*, are very frequently met with on the stems of *Fucus nodosus*. *Laurencia pinnatifida*, or pepper dulse, found growing on stones at Colvend. *Corallina officinalis* grows on the rocks at Douglas Hall, &c., and *Delesseria sanguinea*, *D. aluta*, grow attached to the stems of the *Laminariæ*. *Plocanium coccineum* is abundantly met with along the whole coast, and is a great favourite with every sea-side visitor. *Rhodymenia palmetta*, dulse, not so frequently used for dietetic purposes as formerly, grows attached to the rocks, and the lesser dulse, *Iridæa edulis*, is occasionally met with among the larger seaweeds attached to the rocks. Several species of the *Ceramiceæ* may be found in the waters of the Solway. *Ceramium rubrum*, *C. roseum*, *C. Turneri* are occasionally gathered growing on the larger seaweeds.

SUB-CLASS III.—*Chlorosperrmeæ*.—The grass-green seaweeds are represented by the *Siphonaceæ*, *Confervaceæ*, and *Ulvaceæ*, among which *Cladophora rupestris*, common; *Conferva rupestris*, *C. Albida*, *Enteromorpha intestinalis*, and *Ulva latissima* are frequently met with on the sand shores at Caerlaverock and Ruthwell.

III. *Edgar's MS. History of Dumfries.* By MR JAMES BARBOUR.

Dr Burnside's MS. History of Dumfries, written in the year 1791, contains reference to an earlier MS. account of the town by Edgar. The original of this latter work is not known to be extant, but a transcript of it is embraced in the Riddel MSS. preserved in the library of the Antiquarian Museum, Edinburgh. A copy has been obtained for this Society, and, as desired by the Secretary, I have prepared a brief notice of it.

A note prefixed to his transcript by Riddel explains how it was obtained and who the author was. He says :—"This account of Dumfries was wrote by — Edgar, a burghess of that burgh. He was father to the late Theodore Edgar of Elshields, near Lochmaben. I had it copied from the original MS. in — Edgar's own handwriting, which, in 1790, was in the possession of John Clark, senr., writer (and late Provost) of Dumfries." (In.) R. R. 1791.

A monument to the memory of Theodore Edgar of Elshields stands in St. Michael's Churchyard, from which we learn that he died 5th February, 1784, aged 68. On another stone within the same enclosure we read : "Here lyes the body of Mr Robert Edgar, writer in Dumfries, who lived almost four score years and ten, and died an honest man. July 4th, 1759." This was our author, of whom, although doubtless a prominent man in his day, little is now known. Many legal documents are extant in his handwriting, and the Seven Trades' minute book shows that he acted as clerk to the Incorporations during the long period of forty-five years, from 1701 till 1746, when he resigned.

The MS. appears to have been written at a period later than 1745, the events of that year being referred to in it in terms indicating the lapse of some time since their occurrence. It is entitled :

INTRODUCTION TO THE HISTORY OF THE TOWN OF DUMFRIES.

In which the Origin, Situation, Length, Convenience, Royalizing, Buildings, Demolitions, Advances of Trade, are considered from the Earliest Accounts.

2nd. The Government, Administration and Execution thereof, Crafts Increase, Industry and Manufactures are shown, with Reasonable Remarks and Advices on the Whole.

By a Lover of Truth and of the Welfare of the Burgh.

There is prefixed an address "To the Reader," from which it may be inferred the MS. was intended for publication. The names given to Dumfries, the origin of the town, and its situation, antiquity, and topography are treated of, but the work may be regarded mainly as a disquisition on the constitution of the Burgh and the administration of its affairs.

I will submit a few of the topographical details. The main street is described as extending from the head of Friars' Vennel to Catstrand, a mile in length. Many of the names then common continue in use, such as Friars' Vennel, Townhead, Fleshmarket Street, and Whitesands. Others have given place to new names. Irish Street was formerly known as West Barnraws, Shakespeare Street as East Barnraws, Loreburn Street as North-east Barnraws, and Queensberry Street as Mid Barnraw. The peculiar arrangement of the numerous closes in the town is described as resembling the teeth of a comb. They were on each side of the streets 30 or 40 feet apart, and led down to the inhabitants' houses, yards, and barns. The streets are described as being well paved and free of standing water.

The public buildings belonging to the town were:—The Old Tolbooth, now a bookbinder's workshop, situated opposite the Midsteeple on the south side of Union Street, which was rebuilt before the Rebellion of 1715; the Prison or Pledge-house, which stood on the north side of Union Street, and was built at the King's command and the town's expense in 1583 or 1585, as appeared by an inscription on the forewall; the Midsteeple, built in 1707; and the New Church, built in 1727. The town also added a north-west wing and a tower to the Old Church after the Reformation.

Previous to 1708 there were only two bells in the town—one in St. Michael's Church, supposed to have belonged to Sweetheart Abbey, and one over the Tolbooth, which had been gifted to the town in 1443 by William Lord Carlyle in honour of St. Michael, described as "a little clear sharp sounding bell." It is preserved in the Observatory Museum.

The Fish Cross stood in the High Street opposite English Street; and the site of the Market Cross was the centre of the block of buildings north of and adjoining the Midsteeple.

A great building, called the "New Wark," stood in the space now called Queensberry Square, on the staircase of which were the Royal Arms of Scotland and others, and the date 1583 or 1585.

The Castle, which stood on the site of Greyfriars' Church, was built by John Lord Maxwell and Elizabeth Douglas, his lady, anno 1572, on part of the ground formerly belonging to the Greyfriars' Monastery. The building was of three storeys, with four large vaults in the basements, and a turupike stair and bartizan covered with lead; and there were four or five acres of ground attached to it and walled in. For near thirty years, from 1660 to 1687, the Castle was not possessed by the Nithsdale family, but in 1688, immediately before the Revolution, it was put into complete order and occupied by them. Before the Rebellion of 1715 the Earl of Nithsdale sold the Castle to John M'Dowall of Logan for the sum of one hundred and forty guineas.

The bridge of Dumfries consisted of nine arches, with a tenth arch under the street, and there was a port on it in the middle of the river, which had, our author says, till within these sixty years great valves or gates, which the administrators have laid aside as troublesome.

It was the custom for the county families to reside occasionally or permanently in the county town, and many of them built comparatively handsome houses for themselves there, which much enhanced the town's appearance.

The situation of the town is described as one of the most delectable in the nation, the river Nith being on one side and Lochar Moss on the other, with corn lands between, and with many delightful walks and "refreshing turns" around. The following verses are offered as applicable :

In Nithsdaleshire towards the south there stands
 A royal burgh, which all that shire commands,
 Drumfries 'tis call'd, and very near the town
 The river Nith in chrystal streams runs down ;
 A pleasant bridge that's built with arches nine
 Of red freestone as stretched with a line
 From Vennel-foot to Galloway it tends
 And divers roads thro all that country sends.
 Near eight miles south the mountain Criffel stands
 Well known, and seen from several distant lands,
 And on the east old Solway's force makes way
 With swelling tides both in the night and day,
 And north-east too, tho' distant from the town
 Queensberry stands with her adorning crown,
 Yea round about with many little hills
 This town seems guarded from all threatenng ills ;
 And yet we find much of the country round

Lyes uninclosed, uncultivate the ground,
 Which great defect doth from the owners flow
 For tenants by well-try'd experience know
 (Their tacks being short, as seldom long they be,
 Perhaps three years, or five, or three times three).
 If they should be at cost and pains to make
 Their land prove fertile and much labour take
 To bring the ground a better crop to bear
 Their rents are rais'd or they turn'd out next year.
 This to amend let all attempt with speed
 Who have it in their power to give renead ;
 May many join, and all with one consent
 Obtain at length an Act of Parliament,
 That in North Britain all who set yr. lands
 Shall on stampt paper sign it with their hands
 That all their tenants' tacks or leases bears
 The fixed term of one-and-twenty years,
 That tenants may have time to try and make
 Improvements of their lands for their own sake.
 Let them enclose some aikers every year,
 And plant such planting as the soil will bear ;
 Let summar' justice 'gainst the tenants be
 Quite laid aside, and let them courteously
 Pay all their rents, but if the landlord find
 His tenant backward go, or come behind
 In his improvements, and no friends he have
 That will assist him or his credit save,
 Then let his tack be registrate with speed,
 And others take that will perform the deed.
 If some such method could be thought upon,
 Much money might be sav'd, for much is gone
 Of late to other countries to procure
 Corn, wheat, and rye, that did not long endure.
 But if our lands were all enclosed well,
 And well manur'd, all that in Scotland dwell
 Would be sustain'd, and much would be in store
 For every year's produce would produce more,
 And then North Britain might lift up her head,
 And thankful be when all her sons have bread.

The constitution of the Burgh and the administration of its affairs are criticised at great length and severely. It was the custom, our author says, for the old Council to elect the new, the community having no voice in the election, and no direct power to impugn the actions of their rulers. The result was that affairs were managed mostly by a faction forming little more than a majority of the Council, composed of relatives and friends, banded together to perpetuate the magistracy among them, and whose motive was

love of power and self aggrandisement rather than the good of the town.

Unfortunately there is meagre mention of events of interest to us which took place in the writer's time. Of King James's Provost and of the Revolution we gather the following:—In 1686 King James VII. arbitrarily discharged Burghs from electing their Magistrates and Town Council; and following on this he himself nominated persons to these offices. John Maxwell of Barneleuch in this way became Provost of Dumfries, who was known afterwards as King James' Provost. He was descended from a cadet of the House of Kirkconnell. Being bred a lawyer in Dumfries he became Town Clerk at the Revolution of 1660. He acted as agent for the Earl of Nithsdale, by which he gained considerably. Being a professed Catholic he became, in 1681 or 1682, disqualified by the Test Act to continue as Town Clerk and demitted that office after having arranged for a yearly pension of £5 for life. In 1686 King James VII., as before mentioned, nominated him to be Provost of the Burgh, in which office he continued till the Revolution of 1688, when he and his Council fled, but being taken he was sent to Edinburgh and imprisoned there. His Council granted him, instead of the usual Provost's allowance of 100 merks, a salary of 500 merks per annum in consideration of his residing in the town and attending to its affairs. He sought by his authority to embellish and ornament the town in which he first drew breath by new buildings, causing those that were old and waste to be rebuilt. The paving of the public streets was also initiated by him, the work being brought in his time above the Cross. He had a patent to be a senator of the Court of Session at Edinburgh, for which he was well qualified by long practice and a long head and subdulous wit. This Provost had a sour melancholic command and authority to conciliate reverence and regard, and to ingratiate the people, proceeded in appearance of strict justice more and beyond many of his predecessors; and in regard to his position in the Council, he was sure to have a set of Councillors who, he being King's Provost, only asked what said the Provost and then it was so.

At the Revolution in December, 1688, after King James had gone away to France, the people of Dumfries and the country about arose and burnt the Pope in effigy and took away the popish books out of the popish houses in Galloway, with their priest's vestments in crimson and velvet, and trinkets, and also carved

idols of wood out of the Castle or Palace, and burned all at the Cross of Dumfries on Yule day 1688. And the Magistrates having absconded, the principal heritors and old Magistrates advised the family to remove from the Castle and all Catholics from the town by tuck of drum, to prevent further trouble and damage, which they did accordingly ; and in May following famous Mr Campbell was repossessed in the Kirk to the universal joy of the inhabitants.

Here is a characteristic extract which bears on the history of the Old Bridge :

It is a memorable Remark on some families of Divine Justice that all may fear and beware of exemplary punishments on the enemies of the Church of God, even to the third and fourth Generation of their Fathers, who were guilty, which, says mine author, is discovered in the History of the Church of Scotland, viz., Saturday, the 4th of August, 1621, the time of the proceedings of the Parliament of Scotland and the moment the Commissioner, the Marquis of Hamilton, his rising to sceptre the Act of Parliament ratifying the Assembly holden at Perth, 25th August, 1618, now ratified. In which Parliament John Corsan was an affirming Voter for the Town of Drum [fries] and Amisfield and Lag for the shire of Dumfries, ratifying the five Articles of Perth—there fell out such Blackness and Darkness, three successive great Lightnings, three loud claps of Thunder, Hailstones and prodigious Rains, Fire in the houses of Edinburgh in the morning called the Black Saturday. This Prodigious, tremendous, terrifying, unseasonable weather continued all August, began again in October, And on the 4th of October Ten arches of the Bridge of Perth were broken down by the deluge of waters, and the Bridge of Tweed, almost finished, at Berwick was broken down, and one or two arches of the Bridge of Dumfries next to the town fell, all as tokens of God's displeasure against the cowardly Commissioners, and the places who sent them, in concurring to destroy the Church of Scotland. So that it may be apply'd, that for 120 years these places and families have not prospered. As to the falling or demolishing of the one or two arches of the Bridge of Dumfries nigh the town, I remember, says mine author, a Tradition from some old people in my hearing, half-a-century ago. That a worthy Presbyterian minister being lodged in the house on the East of the Friers' Vennel, named Lag's Lodging, did all that day to twelve o'clock at night, watch and enjoin the people to watch and pray, for that some strange occurrence would fall out that night, and that He himself did watch and heedfully observe the swelling of the River Nith, with the great Tempest of Wind and Rain, and said that he perceived a moles or monstrous Bulk as of many Stones or Trusses of Hay together come down through the Bridge, which took away one or two arches between eleven and twelve at night about that time.

The following accounts not being now extant in the Town Council books may be of value :

The Provost who most improved it was C——ston, who hath left an Account of his management from Michaelmas, 1702, to Michaelmas, 1708, which is as follows :—

Accompt of Debts paid by Colistoun for the Town of Drunfries from Michaelmas, 1702, to Michaelmas, 1704.

	Mks.
To Arbigland of prinl. and @ rent which was owing to his Father, p. Bond	3700 0 0
To J. Irvine, Lady Terraughty, of prinl. and @ rent conform to Bond	3300 0 0
To B. Ewart £1900 prinl. and £18 str. of @ rent owing by Bond	3174 0 0
To Mrs Reid, relict of B. Reid of bygone, @ rents £36 str. ...	0650 0 0
Mrs R.'s prinl., 2600 merks.	
To Janet Real, daughter of J. R. C., of prinl. and @ rents p. Bond	3080 0 0
To 41 Firelocks, @ £9 p. peice	0554 0 0
To Lochaber Axes, Partisans (or Halberts), and Drums ...	0150 0 0
To a part of the Expense of Bridging Lochermoss	0400 0 0
To Sr. David Cunningham in full of several years' salaries accepted by him and discharged	0200 0 0
To Mr Wm. Veitch 50 merk of bygone @ rent of the prinl. sum of £20 str., which I would have paid him, but he could not uplift it without the Presbyrs. consent	0050 0 0
To Dean Johnston the balance of his Treasurer accompts ...	0600 0 0
To 2 years' rent of Mr Robt. Patoun's house, at £12 str., P. ..	0216 0 0

And this beside the Ordinary Salaries and spendings on the Town's affairs, which in one of these years was only about £10 sterling.

1. *Nota.*—I assert that the Town's revenue the said two years at my first entry was only £3000.
2. At Michaelmas, 1704, when Provost Rome succeeded me in the office of Provost, the Town's debt was only about 3000 merks due to B. Ried's children and Mr Vietch as above, and the oldest debt of £600 sterling by Dr Johnston's mortification, which the Town borrowed in 1649, for completing their outreik at the Duke's Levie, for which the Town gave security on the Milnhole Miln (which, as it is known, Provost Crosbie and others have ruined) and which the Church Members should look into.
3. I procured a Compliment from the Royal Burrows of £200 Scots to the poor people burnt out by the fire in the Friars' Vennel in May, 1702, and which I brought home and distributed amongst them according to their several circumstances and necessities.

- 4, The Town having thought fit to relinquish the horse miln which cost the Town great Expenses in Anno 1686, and to build a Miln beyond the Water in Anno 1705 or 1706), several sums were borrowed on that head, to which I was not witness, Mr Thomas Rome being then Provost.

Account of the Town's Debts paid from Michaelmas, 1706, to Michaelmas, 1708.

	<i>Mks.</i>
To the Trades to help to build the Meal Mercat conform to Act of y ^l . Community	400 0 0
Spent by B. Barclay £100, and John Neilson of Chapel £100, abt. Margt. Ramsay's Inditement, and £200 given herself when she went out of the Kingdom, and £200 as the Expences of her Tryal and incident Charges	900 0 0
All this Tryal being before the Magistrates as Judges, the Expence was an peculate and imposition on the Burgh's Revenue.	
Sept., 1707.—Paid to Barncleugh Maxwell of the Arrears of the 100 merks yearly which John Herries, called Butt, should have paid him and relieved the Town, and which Kelton, as then Provost, and now his heirs, should make good to the Town	900 0 0
To Dr Geo. Archbald 1000 merks and a year's @ rent borrowed by Provost Rome towards building the Mill	1055 0 0
To William Rae in Lintonside another 1000 mks. and a year's @ rent for the Mill	1055 0 0
Bought by Coliestoun from Netherwood, 4 Acres of Ground between the Dove-Cote Croft and Castledykes, being a continual bone of contention between him and the Town, they daily poinding one another's Cattle, and more especially on this Motive that Netherwood had a Charter bounding said 4 Acres of Land with the Water of Nith, and having raised a Breve of Perambulation before the Sheriff, by which he designed to have carried away the greatest part of the Dock ; but his perambulation being advocate and made litigious, I forced Netherwood to sell the 4 Acres of Land, whereby the Dock and the same are now worth yearly £240 Scots, and for which 4 Acres of Ground disposed to the Town I paid him Eleven Hundred Merks ...	1100 0 0
To Gavin Carlyle for an road thro' his park in prosperity to the Town's Mill on the other side of the Water	100 0 0
To John Gilchrist (now Baillie) the balance of his Treasurer Accounts	400 0 0
To Mr M'Naught £44 10s as 2 years @ rent of 600 mks. and borrowed for the Mill at Whitsunday, 1705... ..	66 10 0
To James Gordon and Janet Real, spouses, £168 6s, as 2 years a rent of 2000 mks., and £45 10s as 2 years a rent of 600 mks., both borrowed for the Mill at Lammas, 1705, the @ rent being paid to Lammas, 1707 ; both is	320 10 0

25th March, 1708.—Paid to James Gordon the 2000 mks. Bond	<i>Mks.</i>
and @ rent thereof from Lammas, 1707	2064 0 0
To him the other Bond of 600 merks and 7 months and 20 days	
@ rent thereof, and the Bonds and Discharges put up	
in the Town's Charter Chest	627 6 0
At Michaelmas, 1708.—Left at my outgoing £50 str. in the	
hands of John Killhagys, as Treasurer, which was desti-	
nate to repair the Steeple of the Kirk	900 0 0
Suma Totalis ...	25,993 0 0

Nota.—The Burrow's dues on the head of the Missive and fitting the Town's Æque being £20 sterling these 4 years, inde 1460 mks. Item the whole Magistrate's, Officers' fees, and Contingencies; But all are augmented and altered.

IV. *Recent Antiquarian Discoveries at Kirkcudbright.* By
EDWARD J. CHINNOCK, LL.D. (Secretary).

I am indebted to the kindness and courtesy of our esteemed member, Mr George Hamilton, for the following particulars of the interesting discoveries recently made near Kirkcudbright by himself and his friends in connection with the Kirkcudbright Museum. The illustration is taken from a photograph presented by Mr John M'Kie, who is also an honoured member of this Society.

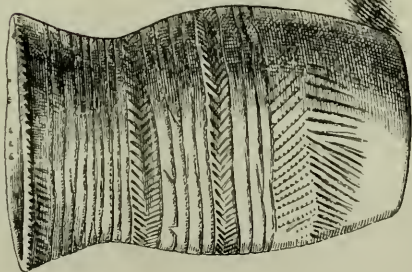
On Thursday, the 10th of April, while the shepherd at High Banks, parish of Kirkcudbright, was driving in stobs to which to hang his sheep nets, his gellock or crowbar pierced a large flat stone about eighteen inches from the surface, and disappeared under the soil. On making examination he found that it had gone into an open chamber, and on laying it bare he found it was a place where some one had been buried. Information was sent that evening to Mr M'Kie, the hon. convener of the Museum Association, and next morning he, with Mr Bell of Gribdae and Mr Hamilton, the hon. secretary of the Museum Association, went to the field and examined the cist. They found that it was the field known as Woodfield, on the farm of High Banks, which was in turnips and being eaten off by sheep. They were joined by Mr Rigg, the tenant, his son William, and the shepherd, who gave them all the information regarding the discovery.

It was a pentagonal chamber, three feet in length and two feet in width, the sides being the longest and parallel, formed of two slabs of slatey rock, the base one slab of the same, and the apex pointing S.S.W. of two similar slabs of stone. Each slab was about eighteen inches wide, and kept in their place by a

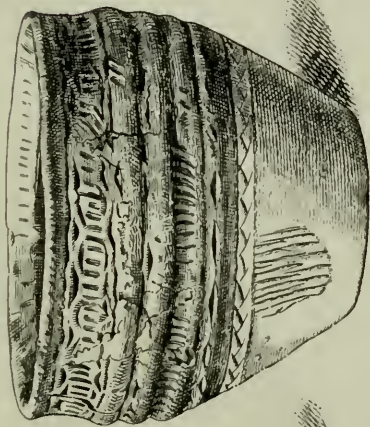
packing of small stones behind each. The top or covering stone was lying alongside—a large irregular-shaped stone, four inches in thickness. This had completely covered the chamber. The floor was composed of two slates, which rested on the soil. The whole was quite clear of anything except two pieces of arm bones, a small piece of a skull, and a piece of a left under jaw, in which were three teeth (two molar and one canine)—young fresh teeth evidently belonging to a youth. At the west side of the cist was a small urn, which, however, fell to pieces very shortly after being exposed to the air. Its contents were apparently nothing but a little earth. This urn was $6\frac{1}{2}$ inches in height by $4\frac{1}{4}$ inches in width. It was well proportioned, had no lid, and was of burnt clay. It was ornamented with old Celtic ornamentation of a kind known to belong to the bronze age, and might have lain undisturbed where it was found at least 2000 years. The ornamentation was evidently done by hand with a comb or some such toothed instrument tracing it round the vase. It consisted of lines drawn round, but not regularly, of zig-zag lines with a chevrony appearance, and was all over the outside of the urn from the top to the bottom. There was no ornamentation inside nor at the bottom outside.

Noticing remains of two large cairns in Woodfield, and having obtained leave from the proprietors, Mr Hope and Lady Isabella Hope of St. Mary's Isle, and the tenant, Mr William Rigg, the members of the Kirkcudbrightshire Museum Association proceeded to open these cairns on the 17th of April. Both cairns are about the same size, being some 200 feet in circumference, quite round, and rising only some six feet from the natural surface of the field, as for years back they had been probably used to get stones for dykes and rude drains connected with the agriculture of the land around. They are 150 yards apart, and nearly north and south of each other. Two good, stout, intelligent labourers, under the direction of Mr M'Kie of Anchorlee, commenced at seven in the morning on the most southern of the two (which lay on the top of a small hillock that had some half a century ago been occupied by the officials of the trigonometrical survey while they were surveying the surrounding country between 1840 and 1850) and cut two trenches at right angles to each other towards the centre, keeping the natural surface of the ground as the floor of the trench. At first they pierced through a circle of smaller stones, which had evidently fallen at different times from the cairn; then they came

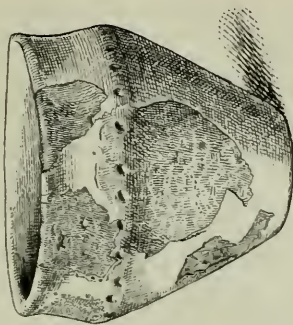
URNS FOUND AT HIGH BARN, KIRKCUDBRIGHT.



1



2



3



upon a ring of large pieces of rock, chiefly quarried from the neighbourhood. Very few travelled boulders were found among them, but inside this ring, which had evidently marked the outside base of the cairn, were heaped up stones of all kinds and descriptions, among which was found a flat stone with evident cup markings and the peculiar dotted appearance caused by the rude sculpturing in these olden times by sharp-pointed pieces of stone. On approaching the centre, the floor, or under part of the trench, which had all along been the original surface of the field, sank, and a rounded chamber about three feet in diameter was reached, filled with very fine earth. This hole was set round with largish stones laid lengthwise, and with no stones inside at all. Rather an amusing incident occurred here. All present, in a great state of excitement, were watching every stroke of the men's pick-axes and spade-ful of earth that was thrown out, when one of the members of the Association called out, "Stop, stop ; there is something carved on this stone," and he brought a stone about a foot square, and, clearing away the soil adhering to it, laid bare a beautiful specimen of the "broad arrow." There was a good laugh at this discovery and some disappointment, for, if this were all, it showed the mound was of recent construction, as the broad arrow is the mark of the Government surveyors, who had used this mound only some half century ago, and many were the quotations from the "Antiquary" of Edie Ochiltree's observations to the Laird of Monkbarms when Aiken Drum's lang ladle was turned up on a somewhat similar occasion. However, the conclusion come to was that this stone had been sunk by the trigonometrical surveyors to uphold their flag or measuring pole while there, and the search was continued with increased zeal. The fine earth in the centre hole was carefully lifted out by hand, and in a short time an urn (in pieces), more highly ornamented than the one found on the 10th, was discovered, and a quantity of bones around it. These bones were in small pieces and considerable quantity, as if more than one body had been buried there, and the remark was hazarded that the urn may have contained the cremated remains of the chief who lay there, while the bones were the remains of slaves who were killed and buried along with him to be his companions or servants in another world, so that he might arrive in it with his customary attendants and in all due state becoming his position in this world. The urn is about six inches in height and six and a half in diameter with no cover, ornamented on the outside

with a running pattern, and lines going round the upper part and lines converging from near the shoulder to the bottom. It was more glazed on the outside, and the burnt clay of which it was composed was much thicker and the mouth coarser and larger than in the one discovered the preceding week.

There was nothing more found, so the trenches were filled up and the mound smoothed over, and the second cairn was attacked in the same way by cutting two trenches from the south and east to meet in the centre. The stones which surrounded this one on the outside were much larger than those encountered in the other, and the workmen had not gone far till they came on pieces of a very plain urn with a quantity of bones, and close by a large flat stone, 3 feet by $2\frac{1}{2}$ in size, which, on being carefully lifted, exhibited a quantity of bones resting on a second but smaller slab of stone, which was also lifted, and a quantity of bones found under this, also resting on another and still smaller stone, which was at the bottom of a sort of well cut out of the solid rock and going down about three feet. There was no urn found there, nor was there any grave or chamber found in the centre, but to the left of it traces of artificial workmanship were found, which it was resolved to follow up some other time. The proprietors of the ground have presented the urns and other objects found to the Kirkeudbright Museum. The urns are beautifully moulded and prove a knowledge of the pottery wheel, and as they are imperfectly burnt, the makers, in order to strengthen them, mixed small pieces of hard stones or perhaps quartz with the clay (all angular). I append a few remarks made by Mr Hamilton in his communication to me:—
“One curious feature, I wonder if it is common elsewhere, is that there were three layers of stones with cremated bones placed between them, and all in a well kind of a pit in the solid rock. The largest stones were on the top, the centre one much smaller, and the bottom one smaller still. The bones were evidently placed there after cremation, as all were in small pieces, mostly under an inch square. There was no cremation before the Bronze Age. There was no tinge of iron or rust on these bones as would have existed had any iron weapons or instruments been found near them. The Iron Age commenced about 150 B.C., so we may put the age of these remains as at least more than 2000 years ago. The urns establish the fact that whoever put them there were not savages. They testify a belief in a future existence, and the cremation teaches a belief in purification by fire. There were no

idols or idolatrous representations found in the cairns or upon the urns, no crescents, crosses, or astronomical signs."

7th of June, 1890.

Field Meeting—Terregles, Holywood, and Dalawoodie.

New Member.—Mr Wm. Stone, Brooke Street.

A party numbering close upon fifty left the town at one o'clock, and drove first to Terregles Church, where they were met by Mr W. J. Maxwell, Terregles Banks, and had an opportunity of inspecting the "Quhair." Then they paid a visit to Terregles gardens; and, making a short detour to see the Druidical Circle and Holywood Church, they proceeded to Dalawoodie, the residence of Mr R. Rimmer, F.L.S., president of the Society, by whom they had been invited to a garden party.

The Quhair, which is an annexe to the church and forms the burial place of the Maxwells of Terregles, was erected by the Lord Herries of Queen Mary's reign, and restored by the late Captain Maxwell, who placed in it the beautiful white marble statue, named "The Angel of the Resurrection" (which was, we believe, the last work of Burnie Philip, one of the sculptors of the London Albert Memorial), and had constructed the series of vaults in the crypt, one of which received his own remains in December last. It is understood that Lord Herries was himself interred here; but no stone indicates his tomb. A slab with a mailed figure quaintly carved in relief, and the date 1568 (being the tombstone of Edward Maxwell of Lamington) is inserted in the pavement of the crypt; and an elaborate monument to Sir John Maxwell of Spottes and his wife, Dame Elizabeth Gordon, the son and daughter-in-law of the Lord Herries just referred to, is placed against the south wall. The first of the family whose tomb is distinctly indicated is "William, commonly called Earl of Nithsdale," the son of the attainted nobleman of 1715. That nobleman and the heroic Countess who effected his rescue from the Tower both died in Rome and were buried in the Eternal City. A very interesting relic preserved in the Quhair is a portion of the carved woodwork of the priests' stalls from Lincluden Abbey. Mr James Barbour gave an address on the history of the edifice.

The Terregles gardens and ornamental grounds are notable for their extent and their magnificence. Stately trees, beech

hedges of giant stature and perfect symmetry, terraces and banks of velvety turf, cunningly contrived grottos, lake and stream, and statuary present at every turn new features that invite the visitor to linger in admiration ; at this season the grounds are gorgeous with the bright and artfully blended tints of the rhododendron and azalea, while on their outskirts a long bank of the yellow broom reflects a golden glow. At the joiner's shop they were afforded an opportunity, through the courtesy of Mr Alexander, of seeing the remaining fragments of the bedstead which was occupied by Queen Mary during the few nights that she spent at Terregles after the flight from Langside. These consist of the woodwork which had formed the head and foot. They are of oak, enriched with a good deal of carving, and two of the turned feet intact. The wooden canopy and some of the tapestry are also preserved, and we were glad to hear that it is in contemplation to have the surviving portions of the interesting but much decayed relic fitted together again.

Only brief halts were made at the Druidical circle and at Holywood Church. At the latter place several gentlemen ascended the belfry, but failed to make out quite satisfactorily the inscription on the ancient bell—a relic, it is understood, of the Abbey of Holywood—although they gave those who remained below a slight taste of its melodious quality.

Dalawoodie, as all Dumfriesians know, is one of the most delightfully situated country seats in the vicinity, immediately overlooking one of the prettiest reaches of the Cairn ; and the spacious and picturesque mansion is in keeping with its pleasant surroundings. Here the large party were hospitably entertained by Mr and Miss Rimmer ; and they were afforded an opportunity of examining rich collections illustrative of natural history and numerous artistic objects which bespeak the learned pursuits and refined tastes of the owner. Mr Rimmer is a distinguished authority and author in the department of conchology, and possesses a magnificent cabinet of British shells. Botany has also engaged much of his attention, and the fruits of his industry are apparent in a wealth of mounted specimens. Numerous fine examples of antique oak carving, of embossed copper work between two and three centuries old, and of early art in other forms, add a charm of their own to the elegantly furnished apartments. Mr Rimmer possesses some fine specimens of antique furniture carved, and rare old china ; and those who visited the Fine Art Exhibi-

tion in Dumfries do not require to be told that he has turned his attention with good purpose also to the gathering of rare old engravings. A very pleasant hour was spent in the gardens and grounds, which are most tastefully laid out and beautifully kept. The botanists found much on which to question their genial host, and his store of information was readily at their command. Having expressed through Major Bowden their thanks for the hospitality which had been extended to them, and been assured by Mr Rimmer that he would be delighted to have them again as his guests next season, the party left about seven o'clock and drove in to Dumfries.

3rd of July, 1890.

At a meeting of the Council, Mr G. F. Scott Elliot, F.L.S., was appointed curator of the Herbarium, with the Misses Hannay and Miss M. Aitken as assistants. A letter was read from Mrs Walter Grierson of Chapel Mount, acknowledging one from Dr Chinnock, in which he had accepted the gift of her late son's (Dr Frank Grierson) Herbarium to the Society.

5th of July, 1890.

Field Meeting--Kirkcudbright, Cally Park, Anwoth, Gatehouse.

New Members.—Mr John Henderson, solicitor; Mrs Sloan, Elmbank; Miss Copland, Abbey House, Newabkey.

Twenty-six members attended, and proceeded by rail to Kirkcudbright, where they were joined by thirteen of the Kirkcudbright Club. The whole party, under the escort of Mr John M'Kie, then drove to Gatehouse, going by way of Nunmill and Borgue, passing the old churchyard of Kirkehris, and along the foot of the wooded moat of Doon. Some distance further on, they passed the bye-road leading across the farm of Balmangan to the burial-ground of the ancient parish of Senwick, now incorporated in Borgue. The party, however, did not visit the churchyard, which is some distance off the road; but pushed on past Balmangan Tower, the seat at divers times of the families of Charteris, M'Lellan, and Carson, and by Pringleton, Borgue, and Plunton Castle. The latter was the seat of the family of Lennox—or, as it used to be

written, Levenaux—which was kin to the family of which Lord Darnley came. The Lennoxes were at one time proprietors of Cally, then called Lennox-Cally, and afterwards inter-married with the Galloway Stewarts.

On entering the policies of Cally, the party were met by the gardener, who showed them through the well-kept gardens, and over the charming walks which intersect the extensive lawns shaded by giant trees of unknown antiquity. By the generous permission of Mr H. G. Murray-Stewart of Cally, the visitors were allowed to explore the mansion-house, under the guidance of the genial butler. They entered by the Marble Hall, which is almost oriental in the splendour of its polished marble and delicate statues. In this hall, on a polished marble table inlaid with coloured pebbles, there stands a fac-simile of Cleopatra's Needle, in black marble. The marble forming the floor was brought from Italy in a rough state and polished at Cally Sawmill by marble cutters brought thither for the purpose, and the huge rounded pillars are built of granite boulders taken from Craigdews, at the back of Cairnmore of Fleet. The size of the blocks is remarkable. The drawing-room was next visited. On the walls are hung striking portraits of the proprietor's wife and mother, and the large table in the room has its top wrought into graceful designs formed by inlaid gems in profuse variety. Several fine examples of the old masters are hung upon the walls.

On leaving the mansion the visitors passed by and inspected the old Cally tower, and proceeded through Gatehouse to Anwoth Churchyard. Here they were met by Rev. Mr Black, the minister of the parish. The old church—roofless now and ivy-grown—is a small building, measuring about twenty-two yards long and scarcely seven broad. A stone over the entrance bears the inscription: "Built A.D. 1627." This is the date of the settlement of Samuel Rutherford as minister of Anwoth, which is said to have been only at that time erected into a separate parish; and it is this association with the memory of the saintly and scholarly divine who first administered within its walls that invests the humble ruined fane with unusual interest.

There are a number of memorial stones within the precincts of the church, some of them elaborately sculptured and bearing quaint inscriptions. The most massive is an architectural structure of light-coloured sandstone, which commemorates several members of the Gordon family, who were for a time owners of the

Ardwell and Cardoness estates. At least one of the interments recorded, it is curious to note, is of earlier date than the church, and this circumstance would seem to indicate that there had been an earlier place of worship. The three boars' heads of the Gordon arms are sculptured on a circular top stone, which bears also the initials "I.G.," and the armorial device is repeated on other parts of the monument, quartered in one instance with three sheaves and three stars. The inscriptions are elaborate, of rude verse but pious sentiment. The first in order of time is that which appears on the north end of the stone, viz. :

Walking with God in puritie of life,
 In Christ I died, and endit al my stryfe ;
 For in my saule Christ heir did dwel by grace ;
 Now dwelis my saule in glorie of his face.
 Thair foir my bodie sal not heir remaine,
 Bot to ful glorie sal suirlye ryse againe.

Mariovne Mure, goodwife of Cullindach, departed this life anno 1612.

This lady was the daughter of the laird of Torhousemuir, Wigtown, afterwards of Cassenearry, Kirkmabreck ; and her husband was William Gordon of Cullendoch. Two wives of their son, John Gordon (by whom in all probability the monument was erected), are the subjects of the other inscriptions.

Dumbe, sensles statue of some painted stones,
 What means thy boast ? Thy captive is but clay ;
 Thow gaines nothing but some few lifles bones.
 Hir choysest part, hir soule, triumphis for ay,
 Then, gazeng friendis, do not hir death deplore ;
 Yow lose a while ; she gains for evermore.

Margrat Makccllane, goodwife of Ardwell, departed this life 2 Aprile,
 162—, ætatis suæ 31.

The title Ardwell here employed is understood to have been derived from the farm of Over Ardwell. Nether Ardwell was at that period in possession of the M'Cullochs ; as was also the estate of Cardoness ; but John Gordon acquired the latter by purchase from his kinsman, William M'Culloch, and it will be seen that in the epitaph of his second wife the title is changed from Ardwell to Cardoness. The second union must have subsisted only for a short time, when it was interrupted by the death of the lady.

Ye gaizers on this trophee of the tombe,
 Send out one grone for want of hir whoise lyfe,

Twyse borne on earth and now is in earth's wombe,
 Lived long a virgine, now a spotles wiff ;
 Church keepis her godlie life ; this tombe hir corps ;
 And earth hir famous name.
 Who then doth lose ? Hir husband no, since heaven
 Hir Saule does gane.

Christen Maccaddam, Ladv Cardynes, departed 16 Juny, 1628, ætatis suae 33.

For the convenience of readers we have introduced some punctuation marks and capitals in reproducing the epitaph ; and have so far modernised the spelling as to use the ordinary characters, instead of v for u and z for y. The initials of the parties are cut in bold characters on the stone in the following order, I being used for J, and C as the second initial both of M'Clellan and M'Cadam :

WG MM IG MMC IG CMC

The burial place of the M'Cullochs of Ardwell is also in the church. Built into a recess in the south wall there is a stone bearing the crest of the Maxwells of Cardoness—a man's head within two laurel branches—and their motto, "Think on," and beneath, along with other heraldic devices, the initials of Captain William Maxwell and his wife, Nicolas Stewart, with an intimation that the monument was rebuilt by them in 1710. This recess formed the doorway by which Mr Rutherford entered when about to ascend the pulpit, which stood against the wall on the west side of the doorway.

John Bell of Arkland is commemorated by a large tablet in the outer wall, with a slightly mutilated Latin inscription, and a piece of sculpture in relief, representing the skeleton figure of Death bearing a scythe in one hand and discharging with the left a dart at a sleeping figure. It may be his wife to whom this epitaph, on a flat tombstone, is dedicated :

Heir lvis Margrat Halliday, spouse to Johne Bel in Archland, who departed this lyff anno 1631, Jan. 27, ætatis suae 76.

O Death, I will be thy death. Now is Christ resin from ye deid, and is the First froot of them that beleive.

These were no doubt relatives of John Bel of Whiteside, the martyr, whose tragic story is told on a neighbouring stone. He was a step-son of Viscount Kenmure, and his mother was a M'Culloch of Ardwell. The inscription over his grave is as follows :

Here lyes John Bell of Whytesyde, who was barbourously shot to death in the paroch of Tongland, at the command of Grier of Lag. Anno 1685.

This monument shall tell posterity
 That blessed Bell of Whitesyde here doth ly,
 Who at command of bloody Lag was shot,
 A Murther strange, which should not be forgot.
 Douglas of Morton did him quarters give,
 Yet cruel Lag would not let him survive.
 This martyre sought some time to recommend
 His soul to God before his dayes did end.
 The tyrant said, What, devil, ye've prayed enough
 This long seven years on mountains and in cleugh;
 So instantly caus'd him, with other four,
 Be shot to death upon Kirkconnel Moor.
 So thus did end the lives of these deare saints
 For there adherence to the covenants.

Small stones in the churchyard commemorate Archibald Faulds and Thomas Irving, servants at Bardarroch, who had accompanied their employer--no doubt the Captain William Maxwell above referred to—"in Flanders and Germany during the wars of the glorious King William."

The party next proceeded to Rutherford's monument, passing on the way Rutherford's Well. The monument is a granite obelisk, erected on the summit of Boreland Hill in 1842, at a cost of £200, raised partly by subscription and partly by a collection taken at a sermon preached on the site of the monument by Rev. Dr Cook of Belfast in 1838. It is 60 feet in height, with a 7 feet square base, and bears on its southern face the inscription:

To the memory of Rev. Samuel Rutherford, minister of the parish of Anwoth. He was appointed Professor of Divinity in the University of St. Andrews, where he died, 1661.

This monument was erected 1842 in admiration of his eminent abilities, extensive learning, ardent piety, ministerial faithfulness, and distinguished public labours in the cause of civil and religious liberty. Surely he shall not be moved for ever; the righteous shall be in everlasting remembrance.—Ps. cxii. 6.

On the reverse side there is an inscription stating that the monument was struck by lightning in 1847, and rebuilt in 1851. In the latter year a conductor was added, which now bears trace against the granite of many a discharge of the electric fluid down the side of the monument. A splendid view was here obtained of

the Isle of Man, with mists hovering over it, and of the Wigtown coast.

The carved stones and remains of the vitrified fort on Trusty Hill adjoining were then inspected.

After dining at Gatehouse, votes of thanks were passed to the Kirkeudbright Society and to the Rev. Mr Black. As representing the Kirkeudbright Field Naturalist Club, Mr Thomas Campbell expressed the pleasure they had in meeting the Dumfries Society.

Votes of thanks were passed to Messrs George Hamilton and M'Kie, Kirkeudbright, for superintending the arrangements of the excursion.

2nd of August, 1890.

Field Meeting—Irongray, Jarbruck, Moniaive, Glencairn Church.

A large party drove first to Irongray Church, where the grave of Helen Walker, the prototype of Scott's Jeanie Deans, was visited. The beautiful falls of the Old Water of Clouden at Routan Bridge were next reached, and then the party proceeded to Glenriddell and Jarbruck Butts. This remarkable elevation was mounted and carefully examined. There are four theories of the origin of this mound—first, that it was a Roman encampment; second, that it was an ancient British burial place for chiefs or priests; third, that it was erected as a moat or place of judgment; and fourth, that it was a British encampment. The visitors, after an investigation and discussion, in which Messrs Barbour and Watt took the principal part, came to the conclusion that the only artificial part of the hill is the western knoll, and that the whole is due to the natural action of the river or water in bygone ages. Probably the place was utilised by the ancients as a moat, and subsequently as a place for the exercise of archery. Here a meeting of the Society was held, under the presidency of Mr James Shaw, and, on the motion of the Secretary, Mr Thomas M'Kie of the Moat was elected a member. Dr Chinnock also intimated that the Council had recommended the election of Messrs W. Lennon and W. Hastings as honorary members on account of their merit as scientists and their services to the Society. On the motion of Mr J. Barbour and Mr W. Moodie respectively the election of these gentlemen was ratified. Mr John Corrie, Moniaive, now conducted the visitors to various objects of interest

in the village and its vicinity, especially noteworthy being the monument erected to James Renwick, the last of the martyrs, who was executed in Edinburgh early in 1688. This heroic young man was a native of the village. A gean tree now marks the site of the cottage where he was born. After passing a vote of thanks to Mr Corrie for his services as guide, the party drove to Glencairn Church, where the Rev. Patrick Playfair was waiting to point out objects of interest. The remains of the old pre-Reformation church and the tombstones of the three Ingleston martyrs were observed, Mr Playfair supplying as much information as he had been able at present to acquire about the old church, the gable ends of which alone remain. He then shewed the visitors through his exquisite garden, pointing out various rare and beautiful plants and flowers. After the Secretary had conveyed the thanks of the Society to Mr Playfair, the party drove back to Dumfries through Dunscore and Holywood villages.

Report of the Formation of the Herbarium. By G. F.
SCOTT-ELLIOT, M.A.

The herbarium of the Dumfriesshire and Galloway Society may now be regarded as an actual entity. It now numbers fully 500 species, in which are included almost all the rarer plants of Dumfriesshire. The majority of those not represented are either very common plants, such as Daisy, and naturalised or planted species and outcasts or escapes. There is no reason why the end of next season should not see us in possession of a complete herbarium of the three counties.

The arrangement adopted has been to number each sheet after the London Catalogue as well as after Bentham's Manual, We have entered on every sheet as definite an account of the locality as we could obtain.

The entire labour of mounting these 500 and more sheets has been performed by the Misses Hannay, with some assistance from Miss Margaret Aitken and Miss Hamilton, and the thanks of the Society are especially due to these ladies for the extremely neat and beautiful way in which this part of the work has been done. It is, moreover, a peculiarly monotonous and self-denying task, and the time and labour spent upon it has been very great indeed. The herbarium has been arranged in order, and is now ready for

consultation by any member of the Society. After consulting with Miss Hannay I have thought the best plan will be to keep it in her house, 1 Victoria Terrace, as a fire cannot be kept in the Society's Rooms during winter. Miss Hannay has, however, kindly saved us all risk in this respect, and members of the Society are cordially invited to inspect it.

The *Hieracia* and certain other doubtful forms will be sent to the Rev. E. F. Linton, of Bournemouth, who has very kindly offered to name all for us and return them. His knowledge of British plants is extremely correct and of great width.

We have received plants from a large number of members of the Society and others, and some have been extremely valuable consignments indeed. It would be invidious to particularise, so I simply append a list of our benefactors: Miss Aitken, Miss Babington, Mrs Gilchrist Clark, Miss Copland, Mr J. Corrie, Mrs Grierson, Miss Hamilton, Mr J. T. Johnstone, Revs. E. F. and W. R. Linton, Miss Milligan, Mr J. Rae, Miss Reid, Mr R. Rimmer, Mr J. Shaw, Miss Ethel Taylor (2 sendings), Miss Tennant, Mrs Thomson, Mrs Carthew-Yorston. The rest have been collected by the Misses Hannay and myself.

A special notice, however, is required of Mrs Grierson's munificent bequest of the herbarium of the late Dr Grierson to the Society. This herbarium is so complete and so accurately named, carefully mounted and prepared, that it is a most valuable bequest, and will, I hope, lead to a great botanical revival in Dumfries. It is also, however, a responsibility to the Society, and should, I hope, be much used next summer.

I hope next summer to begin exchanging duplicates both with members and other societies. This summer I have forwarded some to the Kirkeudbright Museum, which have been acknowledged by Mr Watson, curator. Next year I hope to do this on a more extended scale.

8th September, 1890.

Life Members.

- Miss Dobie, Penfillan House, Penpont, Thornhill.
W. D. Robinson Douglas, J.P., Orchardton, Castle-Douglas.
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J. J. Hope-Johnstone, J.P., Raehills, Lockerbie.
W. H. Maxwell, J.P., Munches, Dalbeattie.
W. J. Maxwell, M.A., advocate (Chairman of County Council),
Terraughtie, Troqueer.
Mark J. Stewart, M.P., Southwick.
-

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William Carruthers, F.R.S., F.L.S., British Museum, Cromwell
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Joseph Wilson, late secretary, Florida Villa, Windygates, Fife.

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Miss Aitken, The Hill, Dumfries.
William Allan, Irving Street, Dumfries.
William Anderson, Netherwood, Dumfries.
Rev. William Andson, Newall Terrace, Dumfries.
J. J. Armistead, The Solway Fishery, Newabbey.
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 Miss J. Hannay, 1 Victoria Terrace, Dumfries.
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 James Hogg, Saughtree, Dumfries.
 David Boyle Hope, Sheriff of Dumfriesshire and Galloway.
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- John M'Kie, Anchorlee, Kirkcudbright.
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 Rev. John D. M'Kinnon, Newall Terrace, Dumfries.
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 William Walls, Bridge Street, Dumfries.
 Thomas Watson, editor of the *Standard*, Dumfries.
 James Watt, Milnwood, Maxwelltown.

- Rev. Robert W. Weir, M.A., Castle Street, Dumfries.
David Welsh, Waterloo Place, Dumfries.
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James Williamson, 25 Terregles Street, Maxwelltown.
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Mrs Maxwell Witham, Kirkconnel, Troqueer.
Miss Maud Maxwell Witham, Kirkconnel, Troqueer.
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1891

THE TRANSACTIONS

AND

JOURNAL OF PROCEEDINGS

OF THE

DUMFRIESHIRE AND GALLOWAY

Natural History & Antiquarian Society,

SESSION 1890-91.



PRINTED AT THE COURIER AND HERALD OFFICES, DUMFRIES.

1891.



No. 7.

THE TRANSACTIONS

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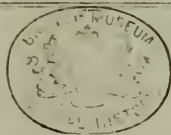
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1891.

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PROCEEDINGS AND TRANSACTIONS
OF THE
DUMFRIESSHIRE AND GALLOWAY
NATURAL HISTORY & ANTIQUARIAN SOCIETY.

SESSION 1890-91.

3rd October, 1890.

ANNUAL MEETING.

Major BOWDEN, Vice-President, in the Chair.

New Members.—Rev. George Laurie Fogo, of Torthorwald ; Rev. Patrick M. Playfair, of Glencairn ; Mr John Rae, Rashiegrain, Teviothead ; Miss Ethel Taylor, Kirkandrews Rectory, Longtown.

Donations.—From the Rev. R. W. Weir, a portrait of Dr Mounsey, the court physician to the Czarina Catherine II. in 1768, and a copy of the pamphlet published in 1815 by Dr Duncan on Savings Banks ; the Report of the Bureau of Ethnology (Washington), 1883-5 ; Report of the British Association, 1889 ; the Essex Naturalist, October, 1889—June, 1890 ; Report of the Belfast Naturalists' Field Club ; Report of Marlborough College Natural History Society ; Proceedings of the Canadian Institute, Toronto, April, 1890 ; Journal of the Elisha Mitchell Scientific Society ; Transactions of the New York Academy of Sciences ; the Problem of the Ohio Mounds ; the Textile Fabrics of Ancient Peru ; Bibliography of the Iroquoian languages ; Bibliography of the Muskogean languages ; the Circular Square and Octagonal Earthworks of Ohio ; the Smithsonian Report of the United States' National Museum, 1886-7 ; Transactions of the Cryptogamic Society of Scotland, 1889 ; Bulletin of Minnesota Academy of Natural Sciences ; Proceedings

of the Holmesdale Natural History Club ; the United States' Geological Survey Report for 1887 ; a photograph of the Urns found in a cist at High Banks, Kirkeudbright, presented by Mr John M'Kie ; five botanical papers presented by the author, Mr G. F. Scott-Elliot.

SECRETARY'S REPORT.

The Secretary (Dr Edward J. Chinnock) read his annual report :—There are now 195 members on the roll of our Society, of whom 23 are honorary members, 7 life members, and 165 ordinary members. Four new honorary members were elected during the session—Mr J. G. Baker, F.R.S., of Kew, and our own townsmen, Messrs William Hastings, Walter Lennon, and Robert Barbour, the late secretary. A considerable number of members resigned on account of the subscription being increased, but 17 new members have been elected. If this rate of increase is maintained, we shall soon regain our former numbers, and there will be little difficulty in even rising beyond them, if the same interest is taken in the work of the Society as has been shown during the past session. The removal from the district of Drs Anstruther Davidson and John Cunningham has been a loss to the Society. Among the members who have been removed by death may be mentioned Mr Walter Grierson of Chapelmount ; Dr W. S. Kerr ; Rev. James M'Farlan, of Ruthwell ; Captain Coustable Maxwell of Terregles ; and Mr J. H. Maxwell, of Castle-Douglas—all men of mark.

Eight evening meetings and three field meetings have been held. At the former 17 papers were read, some of them of considerable value and interest. Without detracting from the merit of other contributors, the communications of Messrs Dudgeon, Andson, Scott-Elliot, J. R. Wilson, and G. F. Black may be mentioned as particularly worthy of notice. The field meetings were well attended and enthusiastic. It is hoped that the excursion to the Border, planned for September, which was omitted on account of unsettled weather, may be made next June.

The thanks of the Society are due to Messrs Andson, M'Andrew, and Scott-Elliot for their valuable scientific researches during the past session. Mr Scott-Elliot especially has been actively employed in collecting materials for our herbarium, which under his indefatigable management promises to

be one of the best in Great Britain. But while we admire the enthusiasm of youth, we do not forget our old colleague, Mr M'Andrew, whose work in the botanical field would do honour to any man in the country. We are still favoured with valuable contributions from him, shewing that his energy in observation is quite as vigorous now as ever it has been. His valuable botanical lists are now being printed in our Transactions, and he is sending in fresh ones still. Mr Scott-Elliot's classes for botany held during the summer deserve honourable mention in this report. This gentleman's efforts are worthy of all praise, and it is an honour to our Society to possess two such thorough botanists as Messrs M'Andrew and Scott-Elliot. The ladies, Miss Hannay and Miss M. Aitken, who are assisting Mr Scott-Elliot in superintending the herbarium, are deserving of the warmest thanks of the Society.

Last session we had the valuable Baxter bequest of minerals and coins. This year we have received an equally valuable donation, that of the late Robert Dinwiddie's scientific library, from his son, Mr Robert Dinwiddie, of New York. Mr Dinwiddie's affection for his native town is another illustration of Horace's line—"*Calum, non animum, mutat qui trans mare currit.*" We have now the nucleus of a good scientific library, and thanks to the exertions of our librarian the books are ready for use by the members whenever they like to avail themselves of the privilege. Another valuable donation is that of Mrs Walter Grierson, who, since the death of her husband, and carrying out his wish as well as her own, has presented to the Society the valuable collection of plants made by her late son, Dr Frank Grierson. This has been placed under the care of Mr Scott-Elliot, and added to our herbarium. I had the pleasure since the last meeting of conveying to Mrs Grierson the thanks of the Society for her donation.

The exhibition of the Baxter minerals and coins, together with a collection of portraits of Dumfries and Galloway worthies, held in November, was a decided success. This success was greatly due to the exertions of Messrs Barbour, Davidson, and Lennox. It is hoped that the attempt to form a permanent collection of portraits of old Dumfriesshire and Galloway celebrities will be borne in mind and prove a reality. For this purpose funds are

required, and contributions will be thankfully welcomed by the officials of the Society.

TREASURER'S REPORT.

The Treasurer (Mr John A. Moodie) read his annual report :—

CHARGE.

Balance in Treasurer's hands at close of last account...	£0	14	8½
Balance at Credit of Society with Dumfries Savings			
Bank		3	8 6
Subscriptions from 131 Members at 5s...		32	15 0
Entrance Fees from 20 new Members at 2s 6d		2	10 0
Arrears recovered from Members		3	0 0
Subscription from Life Member...		2	2 0
Drawings at Door during the Exhibition of Baxter Bequest of Geological Specimens, &c., in November last	£3	6	9
Less Expenses in connection therewith	2	4	6
			<hr/>
		1	2 3
Copies of Transactions sold		0	3 0
Interest on Bank Account		0	0 8
			<hr/>
		£45	16 1½

DISCHARGE.

Paid Mr G. F. Black, Sub-Curator, Antiquarian Museum, Edinburgh, his fee for Transcribing from the Riddell MS. Edgar's History of Dum- fries	£3	3	0
Paid John Grierson & Son for Herbarium, per estimate	2	6	6
,, for Stationery, Printing, &c.	2	5	6
,, for Advertising	1	15	6
,, for Periodicals, Books, &c.	1	0	4
,, Salary of Keeper of Rooms	1	10	0
,, Secretary's Outlays... ..	2	4	7½
,, Treasurer's Outlays... ..	0	19	9
,, Expenses of Calling Meetings as follows :—			
Post Cards	£3	9	8½
Gratuity for Addressing same at 1s per 100	1	4	0
Robert Johnstone, Printer	1	0	0
			<hr/>
		5	13 8½
,, Premium of Insurance		0	4 9
,, Gas Account		0	8 9
,, Miscellaneous Accounts		0	15 6½
			<hr/>
		£22	9 1½
Balance of Funds in favour of Society as follows :—			
(1) Cash in Treasurer's hands	£0	11	0
(2) Balance in Savings Bank	22	16	0
			<hr/>
		23	7 0
			<hr/>
		£45	16 1½

ELECTION OF OFFICE-BEARERS.

The following were elected office-bearers and members of the committee for the ensuing session :—President, Richard Rimmer, F.L.S.; Vice-Presidents, James Barbour, Major Herbert G. Bowden, Thomas M'Kie (advocate), and James G. Hamilton Starke, M.A. (advocate); Treasurer, John A. Moodie; Secretary, Edward J. Chinnock, LL.D.; Curator of Herbarium, George F. Scott-Elliot, M.A.; Librarian, James Lennox; Curator of Museum, James Davidson; Members of Council—Rev. William Andson, John Cowan, William Dickie, Thomas Laing, Robert M'Glashan, Robert Murray, John Neilson, M.A.; George H. Robb, M.A., James S. Thomson, and James Watt.

The Secretary read a report from Mr G. F. Scott-Elliot, B.Sc., on the progress made in the formation of the County Herbarium. This report was printed in the last volume of the Transactions.

The Rev. Adam Andrew, of Chingleput, Madras, exhibited a fine collection of ancient stone implements and weapons from India. His address aroused a great deal of interest, and an animated discussion ensued. The thanks of the Society were awarded to him, on the motion of Mr Watt.

7th November, 1890.

Mr THOMAS M'KIE, V.P., in the Chair.

New Member.—Bailie Alexander Scott, solicitor, Annan.

Donations.—The Journal of the Elisha Mitchell Society of North Carolina for 1890; also, a Palmyra Palm-leaf Book was presented by the Rev. Adam Andrew, of Chingleput, who supplied the following description of it :—This is a Palmyra palm-leaf book, said to be 200 years old, and contains a Telûgû version of two *parvas* or books of one of the two great Indian Epics, called the Mahâbârata. It is written in the Telûgû character, Telûgû being one of the Dravidian languages of South India, spoken by ten millions of people. The Mahâbârata is probably the longest poem in the world. It contains about 220,000 lines, and is divided into 18 *parvas* or books. It was written at some period between the sixth and third centuries B.C. It deals

chiefly with the great war between the Kauravas and the Pândavas, who were descendants, through Bhârata, from Puru, one of the founders of the two great branches of the Lunar race. The object of the great war was the kingdom in North India, whose capital was Hastinâ-pura, the ruins of which are traceable 57 miles north-east of Delhi. The two sections composing this Telûgû version are called—(1) the *Virâta-parva*, which details the adventures of the Pândavas in the thirteenth year of their exile while they were in the service of King Virâta; and (2) the *Udyôga-parva*, which treats of the preparations for war made by the Kauravas and the Pândavas.

Mr Robert Maxwell-Witham exhibited, through Mr J. S. Thomson, a compass and sun-dial carried by William Maxwell when he was out in the '45.

COMMUNICATIONS.

I. *Observations on the Temperature of the River Dee and its Estuary during the past year.* By the Rev. WILLIAM ANDSON.

Rev. Mr Andson read a paper embodying the results of observations on the temperature of the river Dee at Tongland, taken by the Rev. W. I. Gordon, and of its estuary taken by Mr Macdonald, lighthouse-keeper, on the island of Little Ross. Those of the river had been taken daily from 9th September, 1889, to 15th August, 1890, usually about half-an-hour after noon. The mean temperature of the air for the period over which the observations extended was 54·5 degrees; of the water, 50·5 degrees; mean difference of air above water, 4 degrees. Mr Andson's own observations for the Nith brought out a mean 2 degrees lower for the water and 1·7 degree lower for the air; but the periods of observation were not coincident, the spring and summer being in the case of the Nith for 1889 and in that of the Dee for 1890, and there was a slight difference in the hours at which the observations were taken. There was an almost exact coincidence in the mean difference between the temperature of the air and water, the excess of the former in the case of the Nith being 4·3 degrees, compared with 4 degrees in the case of the Dee. With reference to the observations at Little Ross, he expressed the opinion that they must be regarded

as applying to the temperature of the Solway rather than of the estuary; the width of the estuary at the point being more than two miles, so that the water of the river must bear a very small proportion to that of the sea with which it mingled. The observations in this case were taken daily for a whole year, from 1st August, 1889, to 31st July, 1890. The means for the year of air and water were precisely the same—50·3 degrees. There were seven months in which the mean temperature of the water exceeded that of the air, viz., August, September, October, November, December, February, and July. The observations of the Nith estuary, taken at Kingholm Quay, showed that there were two months out of the ten over which they extended in which the mean temperature of the water was higher than that of the air; and if June had been included he had little doubt there would have been three. In the case of the rivers the temperature of the water did not rise above that of the air in any month. Of the seven months in which this occurred in the Little Ross observations, the most considerable excess was in October, November, December, and February, when it ranged from 2·2 degrees to 2·9 degrees. The conclusion he was led to form was that the Solway Firth had a higher relative temperature than that of the rivers which flow into it—a fact which might probably be explained partly by the influence of the Gulf Stream, and partly by the much larger body of water represented by the Solway, which secured greater uniformity of temperature throughout the year. A table of seasonal variations for the rivers and Solway brought out the following results:—Spring Quarter (including March, April, and May)—Nith, 47·8 degrees; Dee, 50·9 degrees; Solway, 47 degrees. Summer Quarter (June, July, and August)—Nith, 60·2 degrees; Dee, 61·1 degrees; Solway, 57·5 degrees. Autumn Quarter (September, October, and November)—Nith, 47·1 degrees; Dee, 49·8 degrees; Solway, 53·1 degrees. Winter Quarter (December, January, and February)—Nith, 38·9 degrees; Dee, 40·2 degrees; Solway, 43·5 degrees. It thus appeared that, while in spring and summer the waters of the Solway had a lower temperature than that of the rivers, the reverse held good in the autumn and winter. This seemed to dispose of the idea that the higher relative temperature of the Solway was caused by the flowing of the tide over the sands left bare at ebb and heated by the sun. In that case

they would have expected that the spring, and especially the summer temperatures, would have been in excess of the rivers, whereas it was in fact lower.

II. *Exhibit of Linnæan Plants.*

Mr James Fingland, Thornhill, sent for exhibition to the Society an extensive and beautifully mounted collection of plants, chiefly from continental countries and some from the northern states of America, which he had obtained through the Linnæan Exchange Club in return for specimens of the flora of this locality. Along with them he sent a short communication, pointing out to botanists who wished to pursue the study systematically that this afforded an inexpensive method of perfecting their collections.

III. *The Martyr Graves of Dumfriesshire.* By the Rev. JOHN H. THOMSON, of Hightae.

Shortly after the Revolution of 1688 the Societies—that is, the confederation of the more strict Presbyterians that had been organised in 1681, and continued through all the years of persecution to hold meetings at short intervals in spite of all the efforts of Government to prevent them or put them down—took steps to erect stones over the graves of those who had suffered death during the reigns of the last of the Stuarts. At first it would seem as if each district society had proceeded to erect a memorial stone or stones to those who had been buried in their neighbourhood. The minutes of the general meetings of the societies still exist, and the earliest notice in their pages of the martyr stones is under date “Crawfordjohn, Oct. 29, 1701,” but the language of the minute implies something had already been done at an earlier time. The minute is :—

“Crawfordjohn, October 29, 1701.

“First concluded that all the correspondences provide and make ready stones as signs of honour to be set upon the graves of our late martyrs as soon as possible; and all the names of the foresaid martyrs with their speeches and testimonies and by whom they were martyred or killed in house or fields, country or city, as far as possible to be brought to the next General Meeting in order for the epitaphs.”

No further notice of the stones appears in the minutes until ten years afterwards, when their erection would seem to have been

completed. At a meeting held at Crawfordjohn, October 6th, 1711, it is recorded:—"The several correspondences were appointed to take a copy of the epitaphs engraven upon the martyrs' gravestones in their several bounds to be brought to the next general meeting." Two years later there is another notice. It is:—

"Crawfordjohn, October 26, 1713.

"The several correspondences are appointed to take care to get a true list of the martyrs who were shot or otherwise killed without process of law, their names, abodes, time and place of their deaths, who killed them, and any other particulars about them, with a true duplicate of the elegies on all the gravestones against the 1st of January, to be sent to Edinburgh."

The result of these labours of the societies appeared in a volume without publisher's names or place of publication. It is simply said to be

"Printed in the Year MDCCLXIV."

and entitled:—"A Cloud of Witnesses for the Royal Prerogatives of Jesus Christ; or, The Last Speeches and Testimonies of those who suffered for the truth in Scotland since the year 1680." The volume closes with the usual FINIS, and a list of errata prefaced by a candid confession that the book is not immaculate.

"Good Reader,—There being several Mistakes of the Press in this Impression, too many to bear any Reasonable Apology; 'tis hoped thy Candor and Ingenuity will pardon the smaller, and thy Pen amend the greater which mar or alter the sense, a List whereof follows."

After this list come six pages with double columns in small brevier type. The six pages begin:—

"To fill up the Vacancy of some Pages, 'tis conceived, that it will be neither impertinent to the subject nor unacceptable to the Reader to insert the following EPITAPHS or Inscriptions that are upon the TOMBS or GRAVE-STONES of the Martyrs, in several Churchyards, and other Places where they ly Buried. And the Reader is desired to Remember, that they being mostly Composed by illiterate country people, One can not reasonably Expect Neatness and Elegant Poetry in 'em, and therefore will readily pardon any Harshness in the Phrase or Metre which he may meet with."

Thirty-eight of these "Epitaphs or Inscriptions" are given. Ten of them are upon stones in Dumfriesshire. These ten are said to be:—

Upon the Grave-stone of Andrew Hyslop lying in Craickhaugh in Eskdalemoor,

In the Church-Yard of Dumfreis upon the Grave-stone of John Grierson who lived in the parish of Irongray.

Upon the Grave-stone of William Welsh in the same Church-Yard.

In the same Church-Yard on the Grave-stone of James Kirko.

Upon three several Grave-stones lying on John Gibson, James Bennoch, Robert Edgar, and Robert Mitchell, who were shot at Inglestoun in the Parish of Glencairn.

On Robert Edgar and Robert Mitchell, both under one stone.

Upon a stone in Tynron Church-Yard lying on William Smith.

Upon Daniel Mackmichael who was shot by Dalziel of Kirkmichael Jan-1685, lying in the Church-Yard of Durisdeer.

The poetry of these epitaphs is in keeping with what is said of it in the introductory words already quoted from the "Cloud of Witnesses," but although not "elegant," or marked by neatness, it has a rough vigour not unsuitable to the times whose deeds of blood it seeks to keep in memory, and it always breathes a strong conviction of the righteousness of the cause for which the martyrs laid down their lives. One specimen will suffice to show what they are. It is the epitaph upon the gravestone of Daniel Mackmichael, in Durisdeer Churchyard :—

AS DANIEL CAST WAS INTO LYON'S DEN
FOR PRAYING UNTO GOD AND NOT TO MEN,
THUS LYONS CRUELLY DEVOURED ME,
FOR BEARING UNTO TRUTH MY TESTIMONY.
I REST IN PEACE, TIL JESUS REND THE CLOUD
AND JUDGE 'TWINX ME AND THOSE WHO SHED MY BLOOD.

All these gravestones still exist. In most cases the letters have been re-cut. Some of them by their deep cutting show that they have been operated upon by Robert Paterson, the Old Mortality of Sir Walter Scott. In several cases, as in Dumfries Churchyard, the stones in recent years, for better preservation, have been set up on supports a foot or more from the ground. As a rule, they are easily found by the footpath made in the grass by a constant succession of visitors to the spot where they lie. Besides these stones whose inscriptions appear in the "Cloud of Witnesses" of 1714, there are several stones in other parts of Dumfriesshire.

In Tinwald Churchyard there is a stone with a long inscription to the memory of John Corbet. The first part of the

inscription is in prose; the second part, extending to fourteen lines, is in rhyme. The first part tells the story. It is:

HERE · LYES · THE · CORPS · OF · JOHN ·
 CORBET · WHO · DIED · THE · 17 · OF ·
 MARCH · 1706 · AND · OF · HIS · AGE ·
 63 · YEARS · WHO · WAS · TAKEN ·
 IN · THE · YEAR · 1684 · BY · A · PARTY ·
 OF · CLAVERHOUSE · HIS · TROUPE ·
 AND · WAS · BANISHED · BY · THE ·
 WICKED · COUNSELL · OF · SCOTLAND ·
 TO · EAST · JARSEY · 1685 · AND ·
 RETURNED · THE · YEAR · 1687 ·

The letters on the stone have been recently re-cut and deepened, and the stone itself set upon supports about a foot from the ground. The stone, previous to its being re-cut, had the marks of age. The letters were all but obliterated by the feet of pilgrims that had come to visit it, and it had quite the appearance of being the work of the first half of last century, probably not long after the death of Corbet. There was a society in Tinwald, and a William Wilson, the writer of a number of forgotten pamphlets and books, was connected with it. Several of his books are in a species of rude rhyme. He is most likely to have been the author of the epitaph upon the gravestone of Samuel Rutherford in St. Andrews, that seems to have been first published in the fourth edition of the "Cloud of Witnesses," issued in Glasgow in 1741. Rutherford's epitaph in the Cloud has the note "Oct. 9th, 1735, by W. W.," and its rhyme is remarkably like that of Wilson in his published books. If I am correct in assigning the rhymes upon Corbet's tombstone to William Wilson, it is not at all unlikely that he wrote the inscriptions on the two stones next to be mentioned.

In Closeburn Churchyard there is a stone to the memory of John Mathieson. The stone has had an eventful history. Dr Simpson, in his Traditions of the Covenanters, chap. xiii., p. 165 (new edition of 1889), says the stone was erected by his children. On it were the names of Mathieson and the persons who were banished along with him, and also the name of the informer who led to their apprehension. This stone was one night destroyed by the informer, but Mathieson's descendants compelled him to restore it, with the omission of what was said about himself.

When I visited the graveyard about five years ago, in the company of the Rev. James Hutton, of Closeburn, I was taken to the stone, but was told that for some reason or other Mathieson's representatives had put another stone upon the top of it, so that while I could see the sides of the stone, the inscription itself was no longer visible. Mathieson was seized by a party of dragoons and banished to New Carolina. Shortly after his arrival he managed to escape, but he had many adventures and much suffering to pass through before he got back to Closeburn, in the autumn of 1687. He survived his wanderings for many years and died October 1, 1709. Dr Simpson, of Sanquhar, says "there is a pretty large account of his sufferings and wanderings written by himself in the possession of a family in Galloway, but it is questionable if it can be recovered." Dr Simpson does not seem to have known of the existence of a rare 18mo. volume printed in Kilmarnock in 1806, for the non-hearer, John Calderwood of Clanfin, entitled—"A Collection of Dying Testimonies of some Holy and Pious Christians, who lived in Scotland before, and since the Revolution." It contains a Testimony by Mathieson extending to eleven pages. It is very possible that this Testimony is the account to which Dr Simpson refers. Along with a great deal of testifying against what he regarded as evils of his time it gives a brief but vivid narrative of his sufferings. This rare volume did not escape the wide research of Lord Macaulay. In a note to the sixteenth chapter of his history he calls Mathieson's Testimony "one of the most curious of the many curious papers written by the Covenanters."

In Dalgarnock Churchyard there is a stone to the memory of James Harkness, farmer in the east end of Closeburn. James Harkness was a man of unusual daring, and took a leading part in the deliberations of the Presbyterians of his district. He became a marked man, and found it prudent to retire to Ireland, then a place of refuge to Scotsmen, but after a short stay he returned to Scotland. Here he and some friends were captured by Claverhouse, and sent to Edinburgh for trial. They were imprisoned in Canongate jail, but on September 16, 1683, he and twenty-five others managed to escape. In reading the story of the escape as given by Wodrow [Book III., chapter vii., section 2] it seems exceedingly like the work of a skilful and fearless man, such as Harkness was. He afterwards planned and success-

fully carried out the rescue of the Covenanters at the pass of Enterkin so graphically described by Defoe in his "Memoirs of the Church of Scotland." He long outlived the Revolution, and died December 6, 1723, in his seventy-second year.

At Alan's Cairn, at a spot where the parishes of Penpont and Tynron in Dumfriesshire and Carsphairn in Kirkcudbrightshire meet together, a stone that in time became a cairn has long marked the spot where rest the mortal remains of George Alan and Margaret Gracie. John Semple, the outed minister of Carsphairn, had been holding a conventicle in what has come to be called the Whig's Hole, a deep hollow that seems as if it had been formed for a meeting place for the persecuted in troublous times. It suddenly sinks down on the Altry hill, not far from the water of Ken, and cannot be seen until its edge is reached. Here a large congregation was gathered, and Semple was in the midst of his sermon when the watcher gave the signal that the dragoons were approaching. The assembly at once broke up. Semple and a few of the older people were taken to a deep moss hag near at hand, while the younger folks fled in an opposite direction to reach another moss hag through which the dragoons could not pass. But they were too late. The dragoons intercepted them before they accomplished their purpose, and fired. Several were wounded, and George Alan and Margaret Gracie were shot dead. On the evening of the following day friends stole under the covert of night to the spot and buried the dead, where they now lie. In 1857 a pillar with an inscription was erected over the grave.

In Kirkmichael parish, on the high grounds that rise up on the west of Glenkilt Burn to the height of eleven hundred feet, and form a table land, the Ordnance Map has marked "Gibb's corse, Martyr's stone." The stone is of some size, and makes one wonder how it got there. It is easily come upon in the moor. Who Gibb was, or how he came to be reckoned a martyr, I have not met any one able to tell me.

IV. *Notes on the Dumfriesshire Flora, with new Localities received from correspondents.* By GEORGE F. SCOTT-ELLIOT, F.L.S.

I was enabled this summer to pay a short visit to some of the outlying districts of Dumfriesshire, and though my time was very

short and the weather very unfavourable, I was still able to note some interesting facts which may perhaps be of some use. First, with regard to the botanical districts of the county, it is instructive to compare our flora with that of Derbyshire, which has been well worked out by Mr Baker. In Derbyshire Mr Baker found the limits of Watson's zones to be as follows:—Infragrarian zone ending at 450 feet, the midagrarian at 1050 feet, and the superagrarian at 1650 feet. I found, however, *Rubus Chamemorus*, which marks the upper limit of the superagrarian zone, constantly appearing (on Pikethow, Causey Grain, Moodlaw Loch, and near Moffat) at a height of 1450 feet; that is to say, 200 feet lower than it usually begins in Derbyshire. This is readily explained by the difference in latitude. In Mr Lees' "Flora of West Yorkshire" the manner in which the zone limits "dip" or diminish in height as one travels north is very clearly brought out. Assuming, then, 200 feet as the difference due to the latitude, we should have 250 feet, 850 feet, and 1450 feet as the limits of Watson's zones in Dumfriesshire. Were this the case, the flora of the lowest region should extend up the Nith to Drumlanrig, up the Annan to the junction of Wamphray water, and as far as Langholm along the Esk. I think, however, that these limits will turn out rather too high. Probably infragrarian plants will not extend so far north as this, though a good portion of the county will still lie in this zone. The limits of the mid and superagrarian zones I could not manage clearly to trace out, but the largest portion of Dumfriesshire is certainly under 850 feet in altitude. There is, however, a very distinct arctic flora which begins about the level of 1450 feet, and so far as I could judge appears with regularity at that height, that is, when soil and rock conditions are favourable.

This arctic flora contains such plants as—*Thalictrum*, *Cochlearia officinalis*, *Cerastium alpinum*, *Rubus chamemorus*, all the *Saxifrages* except *S. granulata*, *Sedum Rhodiola*, *Epilobium alsinifolium*, *Saussurea alpina*, *Hieracium iricum*, and *argenteum*; *Ajuga pyramidalis*, *Polygonum viviparum*, *Avena alpina* Sm., *Carex atrata* and *C. capillaris*, *Poa Balfourii*, *Cystopteris fragilis*, &c. Whether, however, the superagrarian flora extends into the ground of this arctic flora or not is a more difficult question to answer. I have found almost all the commoner forms of this (superagrarian) flora by the sides of small streams and in

ditches at and in many cases above 1450 feet, e.g., *Chrysanthemum leucanthemum*, at a height of nearly 2000 feet at Correifron. The arctic zone, however, if we consider it as marked by presence of *Rubus chamaemorus* and *Cochlearia officinalis*, seems to extend along the watershed of the east and west coast from The Wisp to the Beeftub, and also on the range which ends at Queensberry. The extreme north-west of the county, and especially Beninner and Benbrack, have not so far as I know been thoroughly searched, and this is a point which should be cleared up by our botanists next summer. Whether *Saxifraga nivalis* may be regarded as a proof of the mid-arctic zone occurring in Dumfriesshire is very doubtful, but unless *Veronica saxatilis* and one or two other records are confirmed I should doubt if one could fairly take this to be proved. Thus, in Dumfriesshire, we have apparently at least four and possibly five of Watson's zones represented, and we have also a marked littoral strip and perhaps the best examples of the very special peat-moss flora in Great Britain.

The above sketch is a very superficial one, but my intention has been rather to try and give a general idea of the actual floral divisions of the county than a special account of one locality. I append a list of localities of rare or interesting plants which are not mentioned so far as I know in M'Andrew's work. I include many sent me by our members.

Ranunculus Sardous (Crant) *b. parvulus*.—Auchencass, Moffat Linn.

Nasturtium palustre, R. Br.—(Miss Hamilton) Caerlaverock.

Arabis hirsuta, Br.—Spoon Burn and Correifron

Cochlearia officinalis, Linn.—Causeway Grain, Whitehope, all Moffat hills, Queensberry, Penbreck.

Viola lutea, Huds.—Penbreck, hills near Grey Mare's Tail, &c.

Cerastium alpinum, L.—Craig boar, also near Loch Skene (Mr Johnstone).

Cerastium arvense, L.—Cluden Bridge.

Stellaria nemorum, L.—Woodlands, Penton Linn, and Canobie parish, abundant.

Sagina nodosa, Meyer.—Tordnff Point.

Hypericum hirsutum, L.—Castle-Douglas Road (Mrs Thomson and Miss Milligan).

Geranium phœum, L.—Moniaive (by J. Corrie).

Geranium lucidum, L. (by J. T. Johnstone)—Craigieburn Wood.

Geranium silvaticum, L.—Common; Moffat and Langholm districts up to 1600 feet and beyond.

Empetrum nigrum, L.—Common near Moffat, also Eweslces Downs (J. Rae).

Vicia silvatica, L.—Between Langholm and Canobie.

Ornithopus perpusillus, L.—Dalawoodie.

- Rubus chamaemorus*, L.—Almost always on hills above 1450 feet.
- Geum intermedium*, Ehr.—Spoon Burn, Moffat, Cluden Bank.
- Poterium officinale* (Hook).—Meggat Water; abundant.
- Saxifraga stellaris*, L.—Queensberry, Penbreck, and almost all Moffat hills along right bank of Moffat Water.
- Saxifraga granulata*, L.—Newton House, abundant; near White Bridge, abundant.
- S. hypnoides*, L.—Queensberry, Penbreck, all the hills about Moffat, Meikledale, Langholm.
- Sedum villosum*, L.—White Hope Edge, Eweslees Downs (J. Rae), by Wauehope Water, and Kinnelhead.
- Epilobium angustifolium*, L.—Lochar Moss.
- Epilobium alsinifolium*, Vell.—Eweslees Downs (J. Rae), Black's Hope (Rev. E. F. Linton), Loch Skene hills, and Correifron, abundant.
- Eryngium maritimum*, L.—Rockcliffe (Miss Hannay).
- Oenanthe crocata*.—Glen Mills, Woodlands.
- Galium Mollugo*, L.—Near Old Gretna, Prior's Linn, Canobie.
- Galium sylvestre*, Poll.—Grey Mare's Tail.
- Valeriana pyrenaica*, L.—Cluden banks near the Mills.
- Sanssurea alpina*, D.C.—Midlaw Burn.
- Filago germanica*, L.—Cummertrees (Miss Aitken).
- Cichorium intybus*, L.—Field near Newton House.
- Crepis bicmis*, L.—Tynron (J. Shaw), a new record.
- Crepis hieracioides*, Waldst.—Grey Marc's Tail, Correifron.
(The Hieracia are in the hands of the Rev. E. F. Linton, who has made numerous new records.)
- Pyrola minor*, L.—Lochmaben (Miss Black), Canobie (Miss Taylor).
- Pyrola secunda*, L.—Near Moffat.
- Anchusa arvensis*, Biele.—Cummertrees (Miss Aikin).
- Myosotis silvatica*, Ehr.—Near Moffat.
- Veronica Buxbaumii*, Ten.—Woodslee Orchard, Canobie.
- Veronica montana*, L.—Garple, Beld Craig, Penton Linns.
- Orobanche major*, L.—Kirkeconnell (Miss Witham), Dalawoodie (R. Rimmer), near White Bridge (J. Rutherford), Craigs (Mrs Gilchrist Clark).
- Scutellaria minor*, L.—Colvend (Mrs Thomson).
- Polygonum vivicarum*, L.—Above Loch Skene, probably record of Statistical Account, 1843.
- Urtica urens*, L.—Meggat Water.
- Listera ovata*, Br.—Common in south of county, Penton, Woodslee, Lochmaben, Isle, &c.
- Arum maculatum*, L.—Moniaive (J. Corrie), a new record.
- Blysmus compressus*, Panz.—Moodlaw Loch, a new record.
- Cladium mariscus*, Br.—Loch Kindar.
- Carex atrata*, L., *Carex atrata capillaris*, L., *Carex atrata aquatilis*, Wahl.
—All found by Rev. E. F. Linton—Midlaw Burn.
- Carex lævigata*, Sm.—Beld Crag Burn.
- Milium effusum*, L.—Routen Bridge.
- Poa nemoralis*, L.—Routen Bridge.

5th December, 1890.

MR JAMES BARBOUR, V.P., in the Chair.

New Members.—Rev. Alexander Chapman and Dr Patrick Murray.

Donations and Exhibits.—A collection of the rarer plants of Wigtownshire was presented by Mr James M'Andrew for the Herbarium; a stone hammer found at Newfield, near Ecclefechan, was presented by Miss Aitken. Mr James Barbour exhibited a very fine fungus of the genus of the Polyporus; Mr John Corrie, a valentine over 100 years old, belonging to Mrs Harkness of Dalwhat, Moniaive; Mr J. S. Thomson, a bead found in opening a grave at Sweetheart Abbey, supposed to have been part of a rosary.

Herbarium of British Plants.—The Secretary informed the Council that Mr Carruthers, the Curator of the British Museum (Natural History) had offered Mr G. F. Scott Elliot, M.A., the selection of specimens from the Museum, with the view of forming at Dumfries an Herbarium of British Plants. It was agreed to empower Mr Scott Elliot to make such a selection as he deemed desirable, and that he should be requested to form the Herbarium which he proposed.

COMMUNICATIONS.

I. *A Pre-Historic Colony at Anwoth.*

By MR FREDERIC R. COLES.

The district to which my remarks are limited in the present paper is one so remarkably rich in pre-historic remains that, at first, it seems puzzling where to begin. Its area occupies strictly a good deal less than the five square miles marked out on my enlargement of the Ordnance Survey Map, and the whole of it lies well to the westward of the famous Skyreburn. It is hilly, as you may see from the names and heights of the moorland; the summits of Barholm Hill and Ben John, three miles from the sea, being respectively 1163 and 1000 feet high, while Cairn Harrow, about $1\frac{1}{2}$ miles more inland, touches 1500 feet.

It is well bounded by streams: Cauldside Burn, on the extreme North, falling into the Skyreburn, forming together the largest stream, while Kirkdale Burn runs on the East, and the three

smaller streams, Bardristane, Auchinlarie, and Laggan, contribute their share to the features of the hillsides in the midst.

You will see from the map that the Archæological interest of this area is almost confined, concentrated as it were, to the South-middle portion of it. Here, indeed, we find no less than ten separate localities interesting in themselves, and full of value and use to us as clues, possibly, to the solution of those mysterious symbols, "Cup and Ringmarks." Just outside of this smaller area, and to the west of Kirkdale Burn, we find still another, and as far as tradition goes, a specially interesting relic in *Cairnholy*, the cromlech supposed to mark the grave of the first King of Galloway. While about one mile to the North of Cairn Harrow summit, near the Cauldside Burn, are the *Tumuli* and *Stone Circle* before described by me, and of which there is no breath of report or tradition whatsoever.

Leaving for the present these two distant vestiges out of consideration, and beginning close on the very cliffs, we shall first notice *Kirkclauch Moat*—a notable structure. From the beach of boulders at its base to its summit there are abundant proofs of the strength and guarded importance of this Moat. First, in the lengths of loose masonry lying, now all moss-grown and half hid in luxuriant wild flowers, in confusion, but still evidently once placed in a straight line from the sea landward in a N.E. direction for some five and thirty yards, then the wall takes a sharp turn E. for 22 yards. At this point, being some 16 feet or so above high water mark, it is met by the remains of other walls at right angles, one on each side, from the natural cliff on the one side and the partly built mound of the Moat slope on the other. By this the trench proper is quite evident, and can be traced round to the east of the Moat for a long curve, interrupted once by one of the cross ramparts.

The side of the Moat here is very rocky and very steep. Following the trench we reach the cross rampart at A, which leads us on to the higher and broader one at B, and so to the Moat summit. The large irregular flat space on the N. and W. of the Moat proper is evidently artificial, and may correspond in a sense to the Case-court of an English Moat. The dimensions of the Moat are ninety feet by sixty—the longest facet, that running N. and S., being 48 feet. Its slopes measure 36 feet down to the trenches, but on the seaward side this is much steeper and deeper,

and ends on perpendicular chasms. A small stream—the Bardristan Burn—runs close along the east side of the rampart, and its natural hollow and bank of course yields one more defence to this very well guarded Moat. The extreme W. edge also of the Case-court has been much strengthened by the embedding of large stones. Its slope down to the boulders on the N.W. cannot be less than 60 or 70 feet.

On the N.E. rampart stands the stone which forms the interesting feature in connection with this Moat—a standing stone sculptured on both sides with crosses, and as the New Statistical Account has it, “with strokes supposed to be Runic.”

It is noteworthy also that in his great work on the “Sculptured Stones,” Stuart says that it is likely this stone has been moved from its original position. He gives no authority for this opinion. Only it is odd that the N.S.A. should describe it as being near Boreland Moat when writing of that Moat. Unless there are, or were, two stones 5 feet 3 inches high, and sculptured with crosses on both sides, why should this one be written of in connection with Boreland Moat rather than with Kirkclaugh Moat, where it now stands? And that there may have been two stones is evident from the remark made by a writer unknown, who, in April, 1742, describing Anwoth, says, when speaking of this Moat of K., “and without the ditch on the N. side stands a broad stone erect, about 2 yards above ground, with a cross upon both sides of it, with some carving or inscription below, which I cannot read.”

If the stone at present standing on the rampart of Kirkclaugh Moat stood there in 1742—and that is proved by the above writer’s words—how comes it that the N.S.A. takes no notice of it when alluding to that moat, but does mention it in connection with the Green Tower Moat at Boreland? Unless we give an unusually wide meaning to the term “near,” we are almost compelled to conclude that there were two stones of the same height, and bearing similar sculpturing.

The drawing I submit for your inspection is a minutely accurate copy of one made on the spot with great care; and it shows several peculiarities. First, the simple archaic cross on the south side of the stone has been worked by means of picking—that is, a sharpish flint or bronze tool was held in one hand, and the marks picked or punched out of the surface with the aid

of a hammer. This ancient cross is extremely rude, and probably pre-historic; the whole surface near it being thus picked out in precisely the same way as our cup and ringmarks are. It measures 5 feet high by 1 foot across the arms.

On the other—the north side of the stone—is carved another cross of a much more interesting character, and comparatively modern. Its lines are driven with chisel and mallet. Now, in addition to its odd little cup and ringmark near the right hand angle of the central boss, and a single ring above on the left, the peculiar ornamentation on the entire lower surface of the stone is remarkable. I am inclined to think it may be unique. No other stone in Stuart's "Sculptured Stones" has the same simple diamond-shaped pattern running through it. In that work this stone is represented, but not so satisfactorily as it ought to be. Another point in it is the sort of shoulder formed by the deep notch—one on each side—about 6 inches below the arms of the cross.

Referring to the map we now find if we turn north that, at 1210 yards, we come to very near the spot at Bardristan where, last year, a slab was found covered all over with cup and ringmarks. It is a small squarish thin piece of whinstone, about 15 inches across, and sculptured as you see with a considerable variety of these mysterious symbols.

The largest ring measures $3\frac{1}{2}$ inches in diameter, the cups about 1 inch. It would have been valuable to know in what position this slab was found, whether quite alone or with other stones, whether sculptured or not; but as it was discovered in the re-making of a drain, all chance of interpreting its position is finally lost. It is now, thanks to the care of Mr Kinna, of Newton-Stewart, kept at Bardristane, where it may be easily seen.

A second space of 1210 yards, this time in an N.E. direction, brings us to the standing stones of High Auchenlarie. These two stones are not now on their original site, having been removed about 28 years ago to the garden of Cardoness. Here, again, we touch the archaic; the lines are so simple, and are again conjoined to cup marks. The single line running outside the main design is also curious. The stones are respectively 5 feet 6 inches and 4 feet 8 inches high, and stood upon a knoll nearly midway between the Bardristane and Auchenlarie Burns. Continuing our ramble, and crossing the

Auchenlarie Burn eastward, we come at a quarter of a mile or so to the remains of a stone circle, of which only five stones remain in the circle, the two others being, curiously enough, at points almost equi-distant from the tallest circle stone—one due north, 24 feet off; the other S.S.W., 27 feet off. There was once one other—its exact position I cannot ascertain. It was sculptured copiously with cup and ring marks, and was removed to the garden of Cardoness many years ago. It is well drawn in Simpson's book on Cup and Ring Marks, and bears a strong "specific" resemblance to the Bardristane slab above described.

This stone circle has been 36 feet in diameter, and it is worth notice that its stones are placed at distances which are multiples of its diameter—*i.e.*, six feet between the two prostrate stones. Near the north are 12 feet between the next two, 18 between the next, and 12 feet between the last two. The stones are none of them very large, nor do any of them bear traces of any sculpturing of the simplest sort. But, on the solid rock, about 51 feet S.W. of the tallest stone—the nearest rock surface—I discovered cup and ring marks. Much of the upper part of this slightly sloping rock surface was exposed to the weather, hence the actual sculpturings are not anything like so clear as in my drawing, but they are undoubtedly artificial, as are those lower down on the rock, which were turfed over.

Equi-distant from this stone-circle are two cairns, or rather remains of cairns, one on the N.E., the other on the N.W., each just eleven hundred yards away. The cairn on the N.E. is a somewhat oval-shaped ring of large stones, littered with stones in its enclosure as well as about its circumference. It measures 40 feet by 26 feet, and its longer axis points N.W., Cairn Harrow summit filling in the distant view. Its situation is peculiar, being on a flattish ridge between two steep hill sides, and the ground at either end of it sloping rapidly away—a sort of naturally suggestive position for a monument or burial mound. The distance between the two cairns is a mile and a furlong.

Proceeding from this cairn on Laggan, we reach, at half a mile nearly due south, the Laggan Stone—the most interesting and important of all under the present examination. For here we find a heavy, substantial, roughly pentagonal slab elaborately carved with cups and rings, and placed on the top of a low cairn

of loose stones—a mere pile of stones, indeed, not significant enough to have attracted notice, were it not that we find the apex of this stone pointing unmistakably to the Four Standing Stones of Newton on the Shore Fields, a third of a mile away. This is the point *par excellence* that seems to me important and most interesting in our research into the meaning of these strange symbols. If we can be sure, and until I hear on undoubtedly authentic word that this slab was only recently so placed, I shall believe in its position. If, I repeat, we can be sure that this was the original position of the slab, we have gained at least one clear step further towards the elucidation of the mystery of these Petroglyphs; for we have then a proof of their having some bearing on the burial-places and sepulchral customs of the people who erected these standing stones, and poised these sculptured symbols just this way and no other.

The details of this Laggan Stone are these: There are three groups of rings, each with central cup. The group at the apex has 4 rings (diameter of outer ring being 8 inches) and 2 grooves. The middle group has 5 rings, diameter 9 inches. The third group has 4 rings, diameter 8 inches.

The groups are so arranged that a line bisecting the stone from the middle of the lower edge to the apex cuts the centre of the cup in the apex group and touches the east edge of the cup in the lowest group.

The sides of the stone measure, beginning from apex, eastward, 2 feet 1 inch, 10 inches, 1 foot 10 inches, 1 foot, and 1 foot 10 inches. The spaces between the ring-groups are 8 inches and 3 inches respectively. The cups are rather over 1 inch in diameter, and the outer rings are exactly 1 inch across from centre to centre.

Again continuing our progress, this time seawards, we come at another half mile or nearly so, to the huge grave above referred to as the *Standing Stones of Newton*: very often called "The Three Standing Stones," for the simple reason that only three points are visible from the distance.

This sepulchral monument, however, really consists of seven stones visible above ground; first, a long flattish one, measuring 3 feet 10 inches by 1 foot 5 inches, and very thick, apparently the *kist cover*. At either end of it a headstone, 2 feet 1 inch by 1 foot, and a footstone, 3 feet by 1 foot, and

four pillar stones set upright at each corner. Of these the stone at the south-east angle has fallen. These stones, the highest of which is 5 feet 10 inches, and the lowest 4 feet 6 inches, are to this day found on the slopes of the Laggan Hill and Ben John in long, sometimes almost squarish, oblongs, of about seven feet, and form a ready material for such usage as here exemplified. The lie of the kist cover is nearly due north and south, and the distance between the two end stones is, north and south, 8 feet, and east and west 4 feet.

I had fully intended to open this ancient grave, and so complete the present inquiry by a description of its condition and contents. Inclemency of weather, however, has compelled me to put aside an excavation which might have extended to several days.

I must, therefore, conclude with a summary of what, in my judgment, are the distinguishing features of this Pre-Historic Colony, marking it off from other localities in Galloway.

First noticeable is the variety of character in the relics: cairns, stone circles, kist vaens, and a moat with sculptured stones, and one fragment of sculptured rock. Now, in no other district of equal area do I know of any such variety of character.

The High Banks district, near Kirkcudbright—though it possesses several forts and moats—has only small cairns, and no cup and ring marks on slabs or standing stones, and no outstanding grave such as this at Newton or at Cairnholy.

In other places as, *e.g.*, in the northern parts of the Stewartry and the borders of Ayr and Wigtown, where cairns are pretty frequent, we have as yet little or no trace of sculptured stones, either in cup and ring marks or crosses.

These considerations lend colour to the probability that this Anwoth district once formed an important and comparatively thickly peopled centre—a settlement of some duration—the actual habitations of which have long since passed away, to be remembered only by the cairn and grave and cup-marked stone, as we see them at the present day.

The next characteristic is the differentiation of the types of these remains, and the suggestion that many ages must have played their part in building up such a memorial. It is quite possible that the cairn was the earliest—as it is the most natural—attempt at a constructed tomb. Perhaps the stone-circle followed (for these, as is now pretty generally admitted by

competent authorities, are in reality grave-yards), and lastly the grave-stone, with its sculptured cross, the style of which brings it up to a comparatively modern date.

Another point is the relation and bearings of these ancient structures to the natural features of the ground. It cannot be mere chance that every one of them is quite close to a stream. There is abundance of ground less well watered on either side. The moat at Kirkclaugh is washed by a stream; the two standing stones at High Auchenlarie stood between two streams, as also the stone circle close at hand; while on the Laggan Burn, within 400 yards of it, we find the three distinctive remains of Cairn, cup-marked, stone, and grave.

In the same way, too, Cairnholy and its numerous other remains are close on the banks of what is now Kirkdale Burn, and the cairn and circles on the north slopes of Cairn Harrow are also near another running stream—the Cauldside Burn.

Lastly, the measurements of distances both as to large spaces and small seem to me to indicate some system. As I once before pointed out, all the dimensions in detail of the *Tumuli* and *Stone Circle* at Cauldside are in multiples of 9 and 3; and, I think, you will find that the same law holds good with regard to most, if not to all, the dimensions of these other circles, cairns, sculptured stones, and grave at present described. I do not for a moment wish to be misunderstood to the effect that I advocate the building of a merely fanciful theory of numbers in connection with this subject, but rather simply to draw attention to the fact that certain numbers do certainly occur in these dimensions with a frequency that cannot be the result of a happy accident. When there is so little systematic or regular in a subject as yet so slightly worked out, I think a reasonable endeavour to place any clue in the hands of those who are much more competent than the present writer to investigate the whole subject of Petroglyphs is our plain duty as observers. There is still a vast deal to be done—to be observed, drawn, described, and properly recorded in our annals; for as time goes on and steam ploughs become commoner, the very face of the earth undergoes a change which often causes the heart of the Archæologist to sink within him; and, once lost, the very sites of such a colony as I have attempted to picture to-night, fade away into the past and are forgotten.

II. *Botanical Notes from Wigtownshire, Kirkcudbrightshire, and Dumfriesshire, December, 1890.*

By JAMES M'ANDREW, New-Galloway.

During last July (1890) I again visited Wigtownshire for the purpose of studying its flora. I spent a week with the Rev. James Gorrie, F.C. Manse, Sorbie; and as the result of our work in and around that parish, we added the following plants as new records for Wigtownshire. In Capenoch Moss, north-west of Whauphill Station, we gathered 1, *Drosera intermedia*; 2, *Lycopodium selaginoides*; 3, *Scirpus fluitans*; 4, *Carex Oederi*, Ehrh; and 5, a *Utricularia*, which Mr Arthur Bennett thinks may be *Bremii*. But for a true determination the plant must be gathered in flower. In the neighbourhood of Sorbie village we found 6, *Erophila vulgaris* (*Draba verna*); 7, *Habenaria bifolia*; and 8, *Ranunculus bulbosus*. At Dowalton Loch we gathered 9, *Lycopodium selago*; 10, *Utricularia vulgaris*; 11, *Nitella opaca*; 12, *Polypodium dryopteris*; and we saw growing at Stonehouse the following ferns, which had been taken from the same loch:—13, *Cystopteris fragilis*; 14, *Polypodium phegopteris*; 15, *Polystichum lobatum*; and 16, *Polystichum aculeatum*. At Ravenstone, or White Loch, we got 17, *Radiola millegrana*. In addition to the above, Mr Gorrie has found 18, *Saxifraga granulata* in the grounds of Galloway House, and 19, *Hyoscyamus niger*, in Rigg Bay, south of Garliestown.

The most interesting botanical ground Mr Gorrie and I visited was Dowalton Loch, which, about twenty-five years ago, was drained for agricultural purposes, thus exposing to view several lacustrine dwellings, and the remains of a large canoe. Owing to the very wet summer this year, botanizing this drained loch, except along its margin, was out of the question, but from what we observed I have no doubt it would amply repay a careful search. It has several interesting ferns along its margin. Here we gathered *Ophioglossum vulgatum*, *Cryptogramme crispa*, *Sagina nodosa*, *Ranunculus sceleratus*, *Filago Germanica*, &c.

I next visited Drummore, a pleasant and clean village near the south of the Rhinns, with the intention of confirming, as far as possible, some of the records of the rare plants found in the neighbourhood of the Mull of Galloway. Here for three weeks

I was fortunately assisted by Messrs R. Hogg and W. Paterson, from Kilmarnock. Botanizing along the top of the heughs is dangerous work, but along the Mull head and further north on the west coast we confirmed the existence of *Euphorbia Portlandica*, *Crithmum maritimum*, *Statice binervosa*, vars. *occidentalis* and *intermedia*, not growing like the common *Statice*, on sand and mud flats, but on the tops and the sides of the cliffs. *Inula crithmoides*, *Scirpus Savii* (common), *Mertensia maritima*, *Astragalus hypoglottis*, very plentiful on the west coast; and *Oxytropis uralensis* in several places. I failed to find the following plants once recorded from that district:—*Atriplex portulacoides*, *Apium graveolens*, *Brassica monensis*, *Malaxis paludosa*, and *Ononis reclinata*. Concerning the last-mentioned plant, of which the only British station is on the farm of Cardrain, north of the Mull of Galloway, I may state that it has not been seen there for many years, though it has been repeatedly and carefully looked for. The farmer was unable to say where the plant grew. Frequent landslips may account for its disappearance. It was discovered here in 1835 by Professor Graham, who found it on *debris* at the foot of the cliffs.

In continuation of the list of new records, I add the following from the neighbourhood of Drummore:—20, *Polygala vulgaris*, var. *oxyptera*, on a bank facing the sea at Drummore (this var. has been found in Scotland before only near Stirling); 21, *Chara contraria*, on the west coast, north of Mull of Galloway; 22, *Sagina maritima*, var. *densa*, at the south end of West Tarbert; 23, *Bromus asper*, Grennan wood and south of Maryport; 24, *Bromus arvensis*, south of Drummore Quay; 25, *Listera cordata*, in Shanks Moor and East Tarbert; 26, *Erythraea centaurium*, var. *pseudo latifolia*, var. *capitata* (Koch), on the west coast in abundance; 27, *Cerastium semidecandrum*, south of Drummore; 28, *Trifolium striatum*, south of Drummore in abundance; 29, *Vicia lathyroides*, south of Drummore, in fields; 30, *Mentha aquatica*, var. *sub-glabra*, Ardwell Mill Dam; 31, *Bidens tripartita*, Ardwell Mill Dam; 32, *Geranium pratense*, High Drummore; 33 *Spergularia salina*, var. *media*, Port Logan Quay.

In addition to the above new records, I may include the following new Brambles and Roses, gathered in Wigtownshire in 1889 by Mr Charles Bailey, Manchester:—*Rubus rhamnifolius*, *Rubus umbrosus*, and *Rubus Sprengelii*. The last was gathered

near Newton-Stewart, and is the first record of this Bramble for Scotland. Also *Rosa subcristata*, *R. mollis*, and *R. sub-globosa*.

Some other interesting plants around Drummore may be mentioned: *Orchis pyramidalis*, at Killiness Point, and *Vicia lutea*, at the north end of New England Bay, still keep their ground. South of Drummore, along the shore, may be gathered *Senebiera coronopus*, *Potentilla reptans*, *Cerastium tetrandrum*, *Sagina apetala*, *Sagina maritima*, *Filago minima*, *Filago germanica*, *Trifolium arvense*, *Lycopsis arvensis*, *Calystegia soldanella*, *Glaucium luteum*, *Eryngium maritimum*, *Medicago lupulina*, *Vicia hirsuta*; great abundance of *Raphanus maritima*, *Ammophila arundinacea*, and *Festuca sciuroides*. On the shore of Grennan wood *Vicia sylvatica* grows in plenty; and in the wood itself grow many plants, notably large patches of *Anagallis tenella*. At Port Logan I found *Spergularia rupestris*, and further south *Thymus chamædryis* and *Empetrum nigrum*. At Clanyard Bay grow *Carlina vulgaris*, *Agrimonia eupatoria*, and *Juniperus communis*. At Portencorkrie Bay I gathered *Ligusticum scoticum*, *Convolvulus arvensis*, *Carex vulpina*, *Carex paludosa*, *Aster tripolium*, and *Scirpus maritimus*. On the Mull Head were gathered *Geranium sanguineum*, *Oenanthe lachenalii*, *Parnassia palustris*, *Rudiola millegrana*, *Lycopodium selaginoides*. Around Drummore are *Lavatera arborea*, but planted, *Conium maculatum*, *Carduus tenuiflorus*, *Urtica urens*, *Lamium intermedium*, *Ornithopus perpusillus*, *Habenaria viridis*, *Malva sylvestris*, *Veronica scutellata*, *Alisma ranunculoides*, and *Hypocricum elodes*. At Ardwell Mill Dam were *Lysimachia nummularia*, *Senecio suracenicus*, *Littorella lacustris*; and on the shore about Sandhead, *Equisetum maximum*, and *Cakile maritima*.

Doubtful plants have been named by Mr Bennett, Croydon.

Kirkcudbrightshire.

This year I have found *Juncus tenuis* in another station on the roadside near Shiel, and *Thalictrum flavum*, var. *sphaerocarpum*, Lej., in Kenmure Holms, New-Galloway. Mr Charles Bailey, of Manchester, in 1889, gathered the following Brambles and Roses, chiefly in the neighbourhood of Gatehouse and Borgue:—*Rubus fissus*, *R. Koehleri*, *R. hirtus*, *R. umbrosus*, Bab., *R. affinis*, Bab., all in Borgue; and *R. Sprengelii*, opposite Newton-Stewart. The following Roses he gathered chiefly on the hill on which the

Rutherford monument stands :— *Rosa spherica*, Grev., *R. tomentosa*, Sm., *R. subcristata*, Baker, *R. Watsoni*, Baker, *R. rubiginosa*, L.

Among Mosses I have found *Hypnum cæspitosum*, and *Didymodon flexifolius*, and the rare Hepatic *Harpanthus flotovianus*.

Dumfriesshire.

Mr John T. Johnstone has found *Potentilla alpestris* on Blackhope, near Moffat. This is a very interesting addition to the Flora of Dumfriesshire. He also mentions his finding *Peucedanum ostruthium*, and *Pyrola secunda* near Beld Craig. The Rev. E. F. Linton also records *Rosa Hibernica* from the Grey Mare's Tail.

List of Lichens gathered in Dumfriesshire, Kirkcudbrightshire, &c.

By Mr JAMES M'ANDREW, New-Galloway.

The following list of Lichens is only a contribution towards the Lichenology of the South-Western Counties of Scotland. Most of them have been gathered by myself in the Glenkens. Those recorded from Rerrick were gathered by the Rev. George M'Conachie, Manse of Rerrick. Doubtful species have been referred to Dr Guillaume Nylander, Paris; Dr James Stirton, Glasgow; Rev. James M. Crombie, London; and Mr Joseph A. Martindale, Kendal. Dr Stirton has made several new species of *Usneæ* and *Cladoniæ* from specimens I have sent him, chiefly from the Glenkens. The list contains very few of the minuter species, because they are so difficult of determination. N.G. refers to New-Galloway. The arrangement follows Leighton's "Lichen Flora of Great Britain, Ireland, and Channel Islands."

Ephebe pubescens, Fr. —Kells hills.

Lichina pygmaea, Ag.—Portpatrick; Craggleton, Wigtownshire.

„ *confinis*, Ag.—Maritime rocks.

Synalissa intricata, Nyl.—North of Black Craig and Rig of Craig Gibbert, N.G.

(Note.—This is as yet the only British record of this Lichen.)

Collema nigrescens, L.—Grennan Bank, Fintloch wood, &c., N.G.

„ *conglomeratum*, Hoffm.—Dumfriesshire (Dr Burgess in Leighton's "Lichen-Flora.")

Leptogium musicola, Sw.—Frequent in Glenkens.

„ *tremelloides*, L.—Dunskey Glen, Portpatrick.

- Burgessii*, Light.—Holme Glen ; Knocksheen Glen ; Hannahstown Bridge (in fruit), N.G. ; Duff Kinnel, near Barntimpen, parish of Kirkpatrick ; and in Mollin Linn Wood, Parish of Johnstone, Dumfriesshire (Dr Burgess in "Lichen-Flora.")
- „ *lacerum*, Ach.—Sub Alpine glens ; Grey Mare's Tail (Dr W. Nichol).
- „ „ var. *fimbriatum*.—Coal Heugh, Twynholm ; Tongland.
- „ *sinuatum*, Huds.—Holm Glen, &c., N.G.
- „ *tenuissimum*, Dicks.—Glenlee, and Holme, N.G.
- Sphinctrina turbinata*, Pers.—On *Pertusaria communis*.
- Calicium melanophœum*, Ach.—Glenlee Glen, N.G., on firs.
- „ *hyperellum*, Ach.—Glenlee, N.G., on oaks.
- „ *quercinum*, Pers.—Grennan Bank, and Hagwood, N.G.
- „ *trachelinum*, Ach.—Ballingear Wood, on firs, N.G.
- „ *curtum*, Borr.—Hannahstown Wood, N.G.
- „ *citrinum*, Leight.—On *Lecidea lucida*.
- Coniocybe furfuracea*, Ach.—Ballingear Glen, Holme Glen, &c., N.G.
- Sphærophoron compressum*, Ach.—Bennan Hill, Black Craig, &c.
- „ *coralloides*, Pers.—Burnfoot Hill, &c., N.G.
- „ *fragile*, Pers.—Cairn Edward, and Black Craig, &c.
- Bacomyces rufus*, D.C.—Common.
- „ *roseus*, Pres.—Knocknarling Burn, Grennan Bank, &c., N.G.
- „ *placophyllus*, Pers.—Kinervie Moor, Parton ; Darsalloch, &c., rare.
- „ *icmadophilus*, Ehrh.—Frequent on the hills
- Pycnothelia papillaria*, Duf.—Kinervie Moor, Parton ; 2½ miles west of N.G.

The Glenkens district is very rich in *Cladonia*, especially at the north end of the Bennan Hill. Dr Stirton has made several new species of *Cladonia* from the district.

- Cladonia alaicornis*, Lightf.—Twynholm Hills (Fred. R. Coles, Esq.)
- „ *pyxidata*, L.—Common
- „ „ f. *epiphylla*, Ach.—Knocknalling.
- „ „ f. *megaphylla*.
- „ „ var. *pocillum*, Ach.—Fintloch, N.G.
- „ „ var. *chlorophæa*, Flk.—Townpark, &c., N.G.
- „ „ var. „ f. *myriocarpa*, Coëm.—East of River Dee, in Kelton parish.
- „ *leptophylla*, Ach.—Airie Hill, N.G. ; Kinervie Moor, Parton.
- (Note.—This is the first Scottish record for this *Cladonia*. It is in plenty.)

- Cladonia pityrea*, Flk.—Frequent.
- „ „ f. *hololepis*, Flk.
- „ „ f. *elongata*, Coëm.—Black Craig,
- „ *acuminata*, Ach.—Kinervie Moor, Parton, &c.
- „ *Lamarckii*, Del.—Grennan Bank, and Ballingear Glen, N.G.

- Cladonia fimbriata*, L. — Common
- „ „ var. *alspersa*.
- „ „ var. *costata*, Flk.
- „ „ var. „ f. *prolifera*.
- „ „ var. *conista*, Ach.—Fintloch Wood, N.G.
- „ *fibula*, Ach. f. *subcornuta*, Nyl.—Frequent,
- „ „ var. *radiata*.—Frequent.
- „ *gracilis*, L = *chordalis*, Flk. — Common.
- „ „ var. *aspera*, Flk.
- „ *ochrochlora*, Flk. — Frequent.
- „ „ f. *phyllosticta*.—Ardoch Wood, Dalry.
- „ *verticillata*, Hoffm.—Frequent on the hills.
- „ *cervicornis*, Ach.—Very common.
- „ „ var. *firma*.—Burnfoot Hill.
- „ *degenerans*, Flk.—Bennan Hill ; Barend Moss.
- „ *sobolifera*, Del.—Earlston Wood, Dalry ; Bennan Hill.
- „ *furcata*, Hoffm = *subulata*, L.—Common.
- „ „ f. *exilis*, Mudd.—Cairn Edward Hill.
- „ „ var. *corymbosa* Ach. — Bennan Hill, &c.
- „ „ var. *racemosa*, Hoffm.—Frequent.
- „ „ var. „ f. *recurva*, Hoffm.
- „ *pungens*, Ach.—Frequent.
- „ „ f. *foliosa*, Flk. = *nivea*, Ach.—Earlston Wood.
- „ *squamosa*, Hoffm.—Frequent.
- „ „ f. *vetusta*.
- „ „ f. *rigida* (*furfurosa*, Strn).—Bennan Hill.
- „ „ f. *ventricosa*, Ach.—Ballingear Wood.
- „ „ f. *cucullata*, Del.—Black Craig ; River Ken, at Glenhoul.
- „ „ f. *frondosa*, Del.—Ballingear Glen, N.G.
- „ „ f. *asperella*, Flk.—Ballingear Wood.
- „ *subsquamosa*, Nyl.—Black Craig, Bennan Hill, Ballingear Glen.
- „ „ f. *tumida*, Cromb.
- „ *cæspititia*, Pers.—Blackbank Wood, Glenlee, &c., N.G.
- „ *delicata*, Ehrh.—Townpark, Holme Glen, Backwood, N.G.
- „ *coccifera*, L. = *cornucopioides*, Fr.—Bennan Hill, &c.
- „ *bellidiflora*, Ach.—Bennan Hill ; Black Craig.
- „ *digitata*, L.—Frequent.
- „ *macilenta*, Ehrh.—Frequent.
- „ „ f. *phyllophera*.—Burnfoot Hill.
- „ „ var. *polydactyla*, Flk.—Frequent.
- „ „ var. *carcata*, Ach.—Bennan Hill.
- „ *bacillaris*, Ach.—Black Craig, &c.
- „ „ f. *pityropoda*, Nyl.—Moss Raploch, N.G.
- „ *Floerkeana*, Fr.—Black Craig.
- „ „ *trachypoda*, Nyl.
- Cladina rangiferina*, L.—Frequent.
- „ *sylvatica*, Hoffm.—Common.

- Cladonia sylvatica*, var. *tenuis*.—Up the River Ken.
 „ „ var. „ f. *laxiuscula*.—Up the River Ken.
 „ „ f. *arbuscula*.—Barend Moss.
 „ „ f. *portentosa*, Duf.—Barend Moss.
 „ *uncialis*, L.—Frequent.
 „ „ f. *adunca*, Ach.—Frequent.
 „ „ f. *turgida*.—Moffat, &c.
 „ *districta*, Nyl.—Bennan Hill.

Also the following new forms of *Cladonia subsquamosa* have been named by Dr Stirton in “The Scottish Naturalist”—*Cladonia spilota*, Dundee; *C. dilatata*, *C. cristata*, *C. sublactea*, *C. furfurosa*, Bennan Hill; *C. deflexa*, Bennan Hill; *C. phyllina*, Dundee; *C. compressula*, *C. spicata*. Also, *Cl. furcata*,* *Cl. dispansa*, Bennan Hill; *Cl. ciliata*, *Cl. difissa*. *Cl. arborea*, Lochar Moss; *Cl. contexta*, Bennan Hill; *Cl. commixta*.

- Pilophoron fibula*, Tuck.—Black Craig, &c.
Stereocaulon coralloides, Fr.—Frequent. Caerlaverock Wood. (Dr Lauder Lindsay in “Leighton’s Lichen-Flora.”)
 „ *evolutum*.—Black Craig.
 „ *paschale*, Ach.—Frequent. Caerlaverock Wood.
 „ *denudatum*, Flk.—Black Craig.
 „ „ f. *pulvinatum*.—Black Craig.
 „ var. *cereolinum*, Ach. (*pileatum*).—Frequent on wet rocks.

Usnea barbata, Fr.

- „ „ f. *florida*, Fr.—Common.
 „ „ f. *hirta*, Fr.—Common.
 „ „ f. *dasyypoga*, Fr.—Rare. Troquhain Woods.
 „ „ f. *plicata*, Fr.—Barntimpen Linn, parish of Kirkpatrick, Dumfriesshire. (Dr Burgess in Leighton’s “Lichen-Flora.”)
 „ „ f. *ceratina*, Schær.—Common.
 „ „ „ f. *scabrosa*.—Occasionally.

Evernia furfuracea, Mann.—Marchwell, N.G.; Glenlaggan, Parton, &c.

- „ *prunastri*, L.—Very common on trees.

Alectoria bicolor, Ehrh.—Earlston Wood, Dalry; Kells Hills.

- „ *jubata*, Ach.—Frequent. Moffat.
 „ *lanata*, L.—Black Craig, Cairn Edward, N.G.

Ramalina scopulorum, Ach.—Maritime rocks.

- „ *polymorpha*, Ach.—Maritime rocks.
 „ *calicaris*, Fr.—Common.
 „ „ var. a, *subampliata*, Nyl.—Fintloch, &c., N.G.
 „ „ var. b, *subfastigiata*, Nyl.—Fintloch, &c., N.G.
 „ *farinacea*, L.—Fintloch, &c., N.G.—Common.
 „ *fraxinea*, L.—Fintloch, &c., N.G.—Common.
 „ „ f. *tæniiformis*, Ach.—Common.
 „ „ f. *ampliata*, Ach.—Frequent.
 „ *fastigiata*, Pers.—Common.

- Ramalina pollinaria*, Ach.—Shirmers, Balmaclellan; South Park, near Kirkcudbright.
- „ *evernioides*, Nyl.—Kirkmaiden Churchyard, south of Port-William, Wigtownshire.
- „ *cuspidata*, Ach.—Maritime rocks.
- Cetraria islandica*, L.—Milyea; Corserine; Carline's Cairn; Cairnsmuir of Carsphairn; Beninner, &c.; Hartfell, Moffat. (Dr W. Nichol, in "Leighton's Lichen-Flora.")
- „ *aculeata*, Fr.—Common.
- „ „ f. *muricata*, Ach.—Troquhain, &c.
- „ „ f. *acanthella*, Ach.—Burnfoot Hill, Cairn Edward, &c., N.G.
- Platysma triste*, Web.—Kells Hills.
- „ *sepincola*, Ehrh, var. *ulophylla*, Ach.—Frequent.
- „ *commixtum*, Nyl.—Black Craig, N.G., rare.
- „ *glaucum*, L.—Very common.
- „ „ f. *sorediosa*.—Marchwell, N.G.
- „ „ f. *fallax*, Web.—Occasionally.
- Nephromium levigatum*, Ach, var. *parile*, Ach.—On rocks north of Ballingear, Holme Glen, N.G., rare.
- „ *hisitanicum*, Schær.—Frequent.
- Peltigera aphthosa*, L.—Waterside Hill, Glenhoul, Ballingear Burn, &c., N.G.
- „ *canina*, L.—Common.
- „ „ f. *membranacea*, Ach.—Occasionally.
- „ „ f. *crispa*, Whlnb.—Occasionally.
- „ *rufescens*, Hoffm.—Ballingear Wood, Fintloch Wood, &c., N.G.
- „ *polydactyla*, Hoffm.—Common.
- „ *scutata*, Dicks.—Frequent. Raehills. (Sir W. Jardine and Dr Greville in "Lichen-Flora.")
- „ *horizontalis*, L.—Frequent.
- „ *venosa*, L.—Glenkill Burn and Linn, Dumfriesshire. (Dr Burgess in "Lichen-Flora.")
- Stictina intricata*, Del., var. *Thouarsii*.—Garroch Wood, N.G.; Blackwater Burn, Dalry; Waulkmill, N.G.
- „ *limbata*, Sm.—Frequent.
- „ *fuliginosa*, Dicks.—Garroch Wood, N.G.; near Dumfries, in fruit. (Dr Richardson in "Lichen-Flora.")
- „ *sylvatica*, L.—Frequent. Drumlanrig Wood. (Mr W. Stevens in "Lichen-Flora.")
- „ *Dufourei*, Del.—On River Dee, Tongland.
- „ *scrobiculata*, Scop.—Frequent, Glenlee Glen, &c.
- Sticta pulmonacea*, Ach.—Common. Beld Craig, Moffat. (Dr W. Nichol, in "Lichen-Flora.")
- Ricasolia amplissima*, Scop.—Kennure Woods, Glenlee Glen, &c, N.G.
- „ *late-virens*, Lightf.—Ballingear Glen, Holme Glen, &c., N.G.; Drumlanrig Woods. (Mr W. Stevens in "Lichen-Flora.")

- Parmelia caperata*, L.—Frequent. Colvend.
- „ *olivacea*, L., var. *exasperata*, Ach.—Kenmure Holms, N.G.
- „ „ var. *proliza*, Ach.—Black Craig, Cairn Edward.
- „ *physodes*, L.—Very common.
- „ „ var. *recurva*, Leight.—Common.
- „ „ var. *labrosa*, Ach.=f. *tubulosa*.—Frequent.
- „ „ var. *platyphylla*, Ach.—Burnfoot Hill, N.G.
- „ *cetrarioides*, Del.—Townpark, Glenlee Glen, N.G.
- „ *perlata*, L.—Common. Caerlaverock Road, Dumfries. (Dr Lindsay in “Lichen-Flora.”)
- „ „ f. *sorediata*.—Little Kenmure, N.G.
- „ „ var. *ciliata*, DC.—Frequent.
- „ „ „ f. *excrescens*.—Waterside Hill, Glenlee Mains, Burnfoot, N.G.
- „ *pertusa* (Schrank).—Burnfoot Hill, Ballingear Wood, Gairloch, N.G.; south of Rockcliffe.
- „ *tiliacea*, var. *scortea*, Ach.—Overton, Craigenbay, &c., N.G.; about Ernespie, Castle-Douglas; Rerrick Manse, &c.; near Whithorn; Caerlaverock. (Dr Lindsay in “Lichen-Flora.”)
- „ *Borreri*, Turn.—Common.
- „ *reddenda*, Strn.—North of Fintloch plantation, N.G.; Bellymack, Laurieston; Tongland.
- „ *fuliginosa*, Dub.—Common.
- „ „ var. *late-virens*.—Common.
- „ *conspersa*, Ehrh.—Common. Moffat.
- „ „ *stenophylla*, Ach.—Frequent.
- „ „ *isidiata*, Anzi.—Frequent. Caerlaverock.
- „ „ f. *Mougeotii*, Schær.—Frequent.
- „ *sinuosa*, Sm.—Dumfriesshire. (Dr Burgess in “Lichen-Flora.”)
- „ *saxatilis*, L.—Very common.
- „ „ var. *sulcata*, Tayl.—Frequent. Burnfoot, Fintloch, N.G.
- „ „ var. *furfuracea*, Schær.—Glenlee, Kenmure, &c., N.G.
- „ „ var. *omphalodes*, L.—Kells Hill. Common.
- „ „ var. *panniformis*, Ach.—Frequent. Kells Hill.
- „ *lævigata*, Sm.—Ballingear Glen, Taanach, Burnfoot Hill, Kenmure, Backwood, &c., N.G.

(Note.—There are two forms of this *Parmelia*, one larger than the other.)

- „ *lævigata*, var. *revoluta*, Flk.—Very common.
- „ *incurva*, Pers.—Cairn Edward, Gairloch, Black Craig, N.G.
- „ *subaurifera*, Nyl.—Frequent.

Physcia parietina, L.—Common.

- „ *pulverulenta*, Schreb.—Common.
- „ „ f. *angustata*, Hoffm.—Occasionally.
- „ „ f. *venusta*, Ach.—Occasionally.
- „ *obscura*, Ehrh.—Not common.

- Physcia obscura*, f. *lithotva*, Ach.—Ken Bridge, N.G.
 „ „ f. *ulothrix*, Ach.—Holme, Fintloch plantation, N.G.
 „ *speciosa*, Wulf.—West of Cairn Edward, rare.
 „ *tribacia*.—Colvend.
 „ *stellaris*, L.—Common.
 „ „ var. *tenella* (*Borrera tenella*).—Frequent.
 „ *cæsia*, Hoffm.—On house slates. Common.
 „ *cæsitia*.—Shirmers, Balmaclellan.
 „ *aquila*, Ach.—Maritime rocks.
- Umbilicaria pustulata*, Hoffm.—Grennan, Dalry ; between Cairn Edward and Bennan hills.
 „ *polyphylla*, L.—Bennan Hill, &c.
 „ „ f. *congregata*, T. and B.—Occasionally.
 „ „ f. *monophylla*, T. and B.—Frequent.
 „ *flocculosa*, Wulf (*deusta*, Fries).—Cairn Edward, &c.
 „ *erosa*, Web.—Frequent on Kells hills.
 „ *polyrrhiza*, L. (*pellita*).—Frequent.
 „ *proboscidea*, Ach.—Between Garrorie and Backhill of Garrorie, N.G., rare.
 „ *cylindrica*, L.—Frequent.
 „ „ f. *exasperata*, T. and B.—Milyea.
- Psoroma hypnorum*, Vahl.—Beld Craig, Moffat. (Dr W Nichol in “Lichen-Flora.”)
 „ „ var. *deaurata*, Ach.—Troquhain hills.
- Pannaria rubiginosa*, Thunb.—Frequent. In fruit at Loch Dilly, near Ken Bridge ; Drumlanrig Wood. (Mr W. Stevens in “Lichen-Flora.”)
 „ „ var. *cæruleo-badia*, Scher.—Frequent on trees
 „ *pezizoides*, Web.—Ballingear Glen, Holme Glen, &c., N.G.
 „ „ var. *coronata*, Ach.—Holme House dykes, Glenlee, Marchwell, N.G. ; Dumfriesshire. (Dr Burgess in “Lichen-Flora.”)
 „ *triptophylla*, Ach.—North of Kenmure Castle, Ballingear Glen, &c., N.G.
 „ *carnosa*, Dicks.—Grennan Bank, Townpark, &c., N.G.
 „ *plumbea*, f. Light—Kenmure Woods, Glenlee Glen, N.G. ; Drumlanrig Wood and Barntimpen Linn. (Dr Burgess in “Lichen-Flora.”)
 „ „ f. *myriocarpa*, Del.—Kenmure Wood, N.G.
- Amphiloma lanuginosum*, Ach.—Black Craig, Bankend rocks, &c , N.G.
Squamaria saxicola, Poll.—Frequent.
 „ *gelida*, L.—Loch Dungeon, &c., N.G.
Placodium dissidens.—Frequent. Viewfield, Kells School, &c., N.G.
 „ *tegulare*.—Frequent.—Viewfield, Kells School, &c., N.G.
 „ *citrinum*, Ach.—Dundrennan Abbey.
- Lecanora vitellina*, Ach.—Frequent on walls, rocks, pailings, &c.
 „ *squamulosa*, Schrad.—Frequent on dykes, &c.
 „ „ f. *smaragdula*, Whlub.—Rerrick, &c.

- Lecanora fuscata*, Schrad.—Rerrick.
- „ *tartarea*, L.—Common on rocks, &c.
- „ „ f. *grandinosa*, Ach.—Frequent on trees. Ballingear Glen, &c.
- „ *subtartarea*, Nyl.—Garroch Wood, N.G.
- „ *parella*, L.—Very common on dykes, &c.
- „ *symmicta*, Ach.—Holme.
- „ *atra*, Huds.—Frequent. Rerrick.
- „ *cinerea*, L.—Frequent. Rerrick.
- „ *polytropa*, Ehrh.—Moors of Dumfriesshire. (Dr Burgess in “Lichen-Flora.”)
- „ *lutescens*.—On fir and larch, at Holme, &c.
- „ *sulphurea*, Hoffm.—Dundrennan Abbey.
- „ *subfusca*, L.—Very common.
- „ „ f. *parisiensis*, Nyl.—Overton, N.G.
- „ „ f. *intumescens* (Rebent).—Hannahstown Wood, &c., N.G.
- „ „ f. *coilocarpa*, Ach.—Rocks at Kenmure.
- „ „ f. *gangalea*, Ach.—Rocks at Kenmure.
- „ „ f. *chlarona*, Ach.—Common.
- „ „ f. *geographica*.—Occasionally.
- „ *galactina*, Ach.—Rerrick.
- „ *umbrina*, Ehrh.—Rerrick.
- „ *badia*, Ach.—Common on dykes, &c.
- „ *glaucoma*, Hoffm.—On dykes.
- „ *aurantiaca*, Lightf., var. *erythrella*, Ach.—Rerrick.
- „ „ var. *inalpina*, Ach.—Rerrick.
- „ „ var. *rubescens*, Schær.—Rerrick.
- „ *ferruginea*, Huds.—Rerrick.
- „ *casio-rufa*, Ach., Nyl.—N.G.
- „ *pyracea*, Ach.—Holme, Balmaclellan.
- „ *ventosa*, L.—Frequent on boulders on the hills.
- Urccolaria scruposa*, L.—On rocks, and the under side of stones in dykes—Frequent.
- Pertusaria communis*, DC.—Very common on trees.
- „ *fallax*, Pers. (*Wulfenii*).—Very common on trees.
- Thelotrema lepadinum*, Ach.—Ballingear Glen, Holme Glen, N.G.
- Lecidea atro-rufa*, Dicks.—Black Craig.
- „ *lucida*, Ach.—Under side of stones in dykes.
- „ *decolorans*, Flk.—On earth on the hills.
- „ *quernea*, Dicks.—Caerlaverock. (Dr Lindsay in “Lichen-Flora.”)
- „ *sanguinaria*, L.—Frequent. Burnfoot Hill, &c., N.G.
- „ *enteroleuca*, Ach.—Dundrennan, &c.
- „ *parasema*, Ach.—Common.
- „ „ var. *elæochroma*, Ach.—N.G.
- „ *polycarpa*, Flk.—Ben-y-Guinea, &c., N.G.
- „ *lithophila*, Ach.—Burnfoot Hill, Cairn Edward, &c.
- „ *rivulosa*, Ach.—Burnfoot Hill, Cairn Edward, &c.

- Lecidea fusco-atra*, Ach., f. *fumosa*, Ach.—Common.
 „ *contigua*, Fr.—Very common on rocks on the hills.
 „ „ f. *flavicunda*, Ach.—Moffat, &c.
 „ *albo-cærulescens*, Wulf.—Up the River Ken at Dundeeh.
 „ *canescens*, Dicks.—Dundrennan Abbey, &c
 „ *badio-atra*, Flk.—Cairn Edward, N.G.
 „ *colludens*, Nyl.—Rerrick.
 „ *lutea*, Dicks.—Ballingear Wood, N.G.
 „ *Lightfootii*, Sm.—Frequent about N.G. ; Caerlaverock Road. (Dr
 Lindsay in “Lichen-Flora.”)
 „ *biformigera*, Leight.—Colvend.
 „ *pulverea*, Borr.—Woods about N.G.
 „ *Ederi*, Ach.—Rerrick.
 „ *abietina*, Ach., var. *incrustans*.—North of Black Craig, N.G.
 „ *sphaeroides*, Smrf.—Ballingear Glen, Holme Glen, &c.
 „ *citrinella*, Ach.—Burnfoot Hill, N.G.
 „ *geographica*, L.—Very common ; as on Black Craig.
 „ „ var. *atro-virens*, L.—Ben-y-Guinea, &c.
 „ „ f. *contigua*.—Frequent.
 „ *petræa*, Wulf.—Moffat.
 „ *concentrica*. Dav.—Rerrick.
 „ *parmeliarum*, Smrf.—Common on *Parmelia saxatilis* Caerlaverock.
 (Dr Lindsay in “Lichen Flora.”)
 „ *parasitica*, Flk.—Common on *Lecanora parella*.
Lithographa Andrewii, Strn.—Burnfoot Hill, N.G.
Graphis elegans, Sm.—Not common.
 „ *scripta*, Ach.—Common in its various forms.
 „ „ f. *divaricata*, Leight.—Rammerscales, Dumfriesshire. (Mr
 Thompson in “Lichen-Flora.”)
 „ „ var. *pulverulenta*, Ach.—Frequent.
 „ *sophistica*, Nyl., f. *divaricata*, Leight.—Raehills Wood, Dumfries-
 shire. (Dr Greville in “Lichen-Flora.”)
Opegrapha saxicola, Ach.—Fallbogue Bay, Twynholm.
 „ *varia*, Pers., var. *notha*, Ach.—Kenmure Castle, Holme House,
 N.G.
Arthonia astroidea, Ach.—North of Kenmure Castle, &c., N.G.
Normandina lute-virens, T. and B.—On earthy banks on the hills.
Endocarpon minutum, L.—Ken Bridge ; Rerrick shore ; Eggerness,
 Wigtownshire.
 „ „ var. *complicatum*, Sm.—Along with the type.
 „ *fluviatile*, DC.—River Ken, Shirmers Burn, &c.
Verrucaria nitida, Weig.—Frequent. Holme Glen, &c.
 „ *gemmifera*, Tayl.—On *Lecidea contigua*.

Folk-lore of Glencairn. By MR JOHN CORRIE.

At the present day it is a matter of no little difficulty to realise the solicitude with which the fathers and mothers of a past generation must have watched over their offspring during the tender years of infancy. The hour, the day of the week, the month, and even the year of birth were all supposed to exercise an important influence upon the future fortune and character of the child; while witch and warlock, fay and fairy, had each the power, under certain limitations, of bestowing upon young and especially upon unbaptised children their unhallowed attentions. Starting with the initial step in life, we find a very prevalent belief to the effect that a child born with a "caul"—a thin membrane occasionally found covering the head at birth—is sure to be attended by good fortune in after life. In some districts of the country this "caul," or "holy hood," is supposed to indicate that the child will never be drowned, but in inland Glencairn this part of the belief has failed to perpetuate itself. A child, on the other hand, born with teeth is doomed to misfortune or early death, evils which the mother usually does her best to counteract by having the offending incisors pulled as soon as possible. Among other prevalent notions associated with infancy may be mentioned the belief that specks on the finger nails are prophetic of coming fortune, a belief by no means confined to Scotland, for the poet Crabbe, in his poem of "The Village," says :

"In moles and specks we Fortune's gifts discern,
And Fate's fixed will from Nature's wanderings learn."

Infant feet have their superstitions as well as infant hands, and when the two toes next the great toe lie close together it is looked upon as a sign of riches. Again, a child should go up in the world before it goes down, otherwise it will never rise to distinction in life. Weighing a child was long supposed to have an injurious effect upon its prospects in life, but of late years this belief has been set at open defiance. It was at one time customary throughout the south of Scotland—and we believe the practice is to some extent observed still—to hold a tea-drinking on the birth of a child, when all who wished the child well were expected to taste of the "blyth-meat," as it was called. A similar custom, we are told, prevails throughout the northern and midland counties of England, where "birth-feasts" have long been popular owing to

the opportunities they afford for social enjoyment and amusement. We pass over various other beliefs associated with birth and infancy that we may deal more fully with the important subject of baptism. In Scotland children are still often baptised as early as the second or third week after birth, a haste which is doubtless due, in some measure, to a lingering superstition, for baptism has long been looked upon as the only sufficient safeguard against the influence of the evil eye, or the powers of the ill-disposed fairies; and its performance has in consequence ever been delayed as little as possible. Burns mentions among the "unco's" seen by his hero "Tam o' Shanter," on the night of his eventful ride, "Twa span-lang wee unchristened bairns," whose presence in such unhallowed company was of course due to the circumstance that the potent rite of baptism had been neglected. It was deemed of the utmost importance that the person who carried the child to church on the occasion of the christening should be known to be lucky. Prior to setting out, a small pocket of salt was put in the child's bosom, or attached to some part of the dress, to keep witches away; and if a call was made the mistress of the house was expected to give the child a lick of sugar for luck. Once arrived at church, should there be a boy and a girl to present at the same diet, great care had to be taken to have the boy christened first, else he would grow up effeminate, while the girl would have the boy's beard, a contingency which may have helped to reconcile the gentler sex to a sacrifice of that precedence which we, on all other occasions, concede as their due.

Subsequent to baptism we find a number of curious beliefs. Thus, it is considered most unlucky to let a child see itself in the mirror until all its teeth have been cut. It is also unlucky to cut a child's finger nails or to cut a child's hair, for in the former case you teach the child to steal, while in the latter there is a danger of hair growing over the child's whole body. Another curious belief is that if the cradle be rocked while empty, it will cause its baby owner to have a sore head. Satanic or elfish influences, inimical to the child, were repelled by the use of the three oils—a mystic preparation with which the forehead was bathed as occasion might require.

Coming to speak of marriage we notice first of all the various modes of love-divination. In Scotland "All Hallow's Eve" is, of course, the popular festival for practising this form of super-

stition, and the devices resorted to by love-sick swains and languishing maidens desirous of ascertaining their lot in the marriage state are almost bewildering in their variety. We content ourselves with noticing a few of the more important. A rite rarely neglected at this propitious season was the dipping of the sark sleeve in water where three laird's lands met. The garment was then taken home and hung over the back of a chair to dry, due care being exercised to place it in such a position that the maiden could have it constantly under view during the night; for should marriage be her lot in life the husband she was to get would enter the apartment and turn the garment. A story still lingers in the district of a much-respected doctor's wife who successfully practised the rite when a young and unasked maiden. She had retired to rest at the usual hour, but was too anxious as to the result of her experiment to sleep. Close upon the stroke of twelve a man she had never seen before silently entered the room, turned the "sark," and then, as if to leave some tangible proof of his visit, deliberately stuck a pen-knife through the sleeve of the garment. The man she saw on that Hallowe'en night was the man she afterwards married, and to her dying day she possessed an unwavering faith in the genuineness of the visit.

We may mention in this connection a peculiar practice long common in the district on the 1st of May. Some time during the day, maidens curious in matters matrimonial pulled nine stalks of yarrow "to dream on." These were placed beneath the pillow for three successive nights, and if the spell succeeded, the maiden's future husband either appeared in person or had his name mysteriously announced to her in a dream. Tibby B——told me that long before she saw her man she dreamed about him on the yarrow, and saw him as plain as she ever saw him in after life. "I was lying in the turnip field," she said, "when he came to me and said, 'My lass, ye'd better gie me ye're hoe an' I'll help ye a bit.' I answered, quite careless like, 'Ye may hae't'; sae he took it, and after workin' a bit and talkin' a bit he left me, an' it was in that very way and wi' thae words on his lips Rab C——courted me for his wife."

Another popular method of love-divination was to pare a turnip round and round without breaking, and then to hang the long spiral peeling over the doorway; the name of the first person who afterwards entered being supposed to correspond with that of the

future partner in life. Those again who were curious as to the number of their future family only required to pull a stalk of corn out of a corn rick and see how many ears adhered thereto. Whatever the number—two, four, or eight—the family would be accordingly. Even such trivialities as the coming husband's age and the particular colour of his hair could be ascertained by those who cared to undertake the appropriate rites. But we have said enough to show the importance that was attached to these divinations, and we must now glance at the numerous superstitions connected with the all-important marriage ceremony itself.

Immediately the "banns" had been proclaimed—and it may be remarked in passing that it was considered most unlucky for anyone to hear their own banns proclaimed—the bride became an object of interest to the whole of her unmarried male or female acquaintances, for a charm was supposed to reside in her person which rendered it specially lucky for them to rub shoulders with her. It is still customary in Glencairn for the bride and bridegroom to sally forth perhaps a week before the date fixed for the wedding, and deliver their invitations in person. Sometimes as many as a hundred invitations will be given in this way, and although all may not attend the ceremony there are few who do not acknowledge the invitation by sending a present to the bride.

The state of the weather on the wedding day was, of course, a subject of paramount interest. Sunshine seems to have been looked upon with most favour, but as an offset to this we have the adage, "Sap bodes luck," a considerate concession to those upon whom the sun refused to shed his beams of blessing. It was considered lucky for a bride to change some minor article of wearing apparel before going to get married, but the marriage gown once donned had on no account to be stripped until the ceremony was over. Perhaps the most important custom in the eyes of the guests at a rural wedding was the "running for the broose," a race in which the young men of the bridegroom's party competed for the bride's handkerchief. Originally the prize to the winner seems to have been a dish of brose, hence the name of the race; but of recent years it has become customary to substitute a handkerchief or a bottle of whisky as the trophy of victory. The contest sometimes took place on foot, sometimes on horseback. In Burns's day horseback racing must have been the rule, for

when the auld farmer makes his "New Year morning salutation to his mare Maggie," he says :

When thou was corn't, and I was mellow,
 We took the road aye like a swallow,
 At broozes thou had ne'er a fellow
 For pith and speed ;
 But every tail thou pay't them hollow,
 Where'er thou gae'd.

At my grandfather's marriage, which was attended by a hundred people all mounted, the racing was also on horseback, for landlord Smith, of the old Oak Inn, fell from his horse and was nearly killed, much to the distress of my grandparents, who interpreted his mishap as an omen of misfortune to themselves. It was long customary in Glencairn, and we believe the custom prevailed in other districts of the country, for an elder sister to dance in her stocking soles at the marriage of a younger one. We have also a belief that a sister acting as bridesmaid on three separate occasions, thereby sacrifices her own chances of marriage. With the groomsman or "best man" superstition has been less exacting, and, so long as he gives a liberal "ba'" to the children, he may officiate as often as he chooses. The marriage ceremony over, and the rice or old shoes thrown after the newly-married pair for "luck," it might be expected that now, at all events, there would be an end to superstition ; but this was by no means the case. The entrance into the new home was quite as much beset with ordinance as the leaving of the old one, and the "young folks" had no sooner arrived at their destination than the new-made wife was presented with a pair of tongs, as symbolical of her duties, while over the heads of husband and wife, as they entered, bread and cheese were broken in token of welcome and blessing. It was an established belief that salt should be taken into a new house before "kennelin," that is, fire, and down to a recent date this practice was religiously observed throughout, at least, the south of Scotland. Burns, we are told, countenanced the rite when he took up house at Ellisland, more, we suppose, from sympathy with national custom than from belief in its virtues.

Close upon the marriage came "the kirkin'," an important ceremony, which usually took place on the first Sabbath after the nuptials. Neither the best man's nor the bridesmaid's duties were supposed to be complete until this ceremony had been per-

formed, and in rural districts even yet a selected party of those who have been assisting at the marriage festivities accompany the bride and bridegroom to church.

The solemn and mysterious nature of death renders it a peculiarly fit subject for superstition, and in no other event of life has it shown the same vitality. Death warnings are not now, perhaps, generally believed in, but there are still those who cannot hear the howling of a dog or the ticking of a death watch without a certain feeling of trepidation. When we remember the numberless other portents of approaching dissolution believed in by our forefathers, we cannot help commiserating them in the many discomforts to which they must have been subjected by an over-credulous faith.

Among local portents a mysterious light known as "the light before death" holds an important place, and instances are frequent in which the light has not only been seen, but has proved itself a faithful forerunner. The following, extracted from our gleanings, may serve to illustrate the belief. An old Glencairn lady on looking out of her door one dark night saw a strange light shining in the vicinity of a house where an acquaintance lived. Entering the house she commented on what she had seen, and expressed the hope that "it wisna the deid licht." Her fears were ridiculed; but next morning it transpired that a member of the family, over whose dwelling the light was seen, had committed suicide.

We have another illustration, and perhaps a more valuable one, on account of its precision. Peggy D—— when going to lock her door one night saw a light go past, carried, as she supposed, by a neighbour. There was nothing unusual in this, but there was a high stone dyke with a flight of steps in it, close to the foot of the garden, and she was surprised to see the light and supposed light-bearer pass right through the obstructing fence as if nothing of the kind had been there. Then, again, although the ground below the house was very uneven, the light itself was never lost sight of for a moment. Peggy, rooted to the spot, watched the light go down through the fields, then along the public road until the churchyard was reached, when turning in that direction it passed through the locked gate with the same apparent ease that the other obstacles had been surmounted, and, entering the graveyard, became lost to sight among the tombstones. A week

later Peggy D——'s daughter was carried a corpse to the same churchyard.

The howling of a dog as a death-warning has already been referred to. It is one of the oldest as well as one of the most prevalent of superstitions. "C. W. J.," writing in Chambers's "Book of Days," suggests that there may be some truth in the notion, as a peculiar odour frequently precedes death, which may render the dog uneasy. No one acquainted with the dog's acute powers of scent will be disposed to call this an extravagant suggestion. Another widespread belief is that the genius of death announces his coming by means of some mysterious and supernatural noise. Thus, a knock on the door, or on the floor of a room, or in the vicinity of a sick person's bed, is sure to be looked upon as "a call." We have heard of one family to whom the warning came in the form of a sound resembling the smack of a switch against the window-pane. This sound was heard three times in succession, and immediately after the third repetition an ailing member died. A native of the neighbouring parish of Tynron informs me that to hear a cock crow six times before six o'clock is a sign of a death. The magpie is another bird of evil omen, and its chattering near a dwelling is supposed to foretell the decease of one of the inmates. The raven and the owl are even more unpopular than the magpie. Spencer speaks of "The ill-fac'd owle, death's dreadful messenger;" while the raven is invariably associated by our old Scottish balladists with scenes of death and dolour.

In addition to these general portents of death, we have death warnings peculiar to certain families of rank. Thus the death of a member of the Craighdarroch family is supposed to be heralded by a sudden and simultaneous peal of household bells, while to a member of the Closeburn family the warning comes in the form of a white swan. The late Dr Ramage says that this omen saddened the nuptials of Sir Thomas Kirkpatrick, the first baronet, when marrying for the third time.

In Glencairn there formerly existed a curious belief that the soul flew out of the mouth of the dying in the form of a bird. A story still lingers in the district of a joiner's apprentice who made this belief the subject of a somewhat ill-timed practical joke. An old man had died in the village, and the joiner and his apprentice were busy preparing the coffin. Just as it was finished a sparrow

happened to visit the workshop, and the apprentice, unnoticed by his master, pounced upon the bird and slipped it into the coffin. Shortly afterwards master and apprentice carried the coffin to its destination. No sooner had the lid been unscrewed than the sparrow took to flight, to the evident discomposure of the assembled friends, who looked upon the bird as the disembodied soul of the deceased.

Very different were the manifestations associated in the popular mind with the death of the wicked. Our local annals supply us with at least one example in which exaggeration has been carried to the verge of the ridiculous. We refer to the stories told in connection with the death of the notorious prosecutor Lag. Thus it is said that shortly before he died he was actually experiencing on earth a foretaste of the penalties that had been prepared for him in the world to come. So terrible was the agony he endured that he prayed for bucketfuls of water to be thrown over him to cool the burning heat of his body, a heat which must have been terrible indeed, for we are told that when he spat on the floor his spittle "frizzed" for several seconds on the spot where it fell, and left thereon an indelible impress. Even death did not terminate these unwonted manifestations, for a black dog and a raven were seen to accompany the funeral cortege all the way to the grave, while the four horses which were engaged in the unhallowed work of taking him thither all shortly afterwards perished in the same mysterious fashion. I have myself conversed with a woman who heard a sound as of chains rattling, and saw long spectral shadows flit fitfully past as she stood by the "nettle neuk" where the hated prosecutor lay.

Happily, death is not always, or even frequently, accompanied by cantrips of this kind, and it is almost with a sense of relief we turn to the more ordinary associations of this the most solemn period in man's chequered history. When a person died it was a common practice to stop the clock, and to cover the mirror with a cloth, while on the breast of the dead a vessel of salt was placed as a protection against evil influences. Napier suggests that this latter custom had its origin in the rites of the "sin eaters," who, having placed a plate of salt and one of bread on the breast of the corpse, repeated a series of incantations and afterwards devoured the contents of the plates, by which means the deceased person was supposed to be relieved of such sins as would have

kept his spirit hovering about his relatives to their discomfort and annoyance. A funeral is still an occasion of some ceremony in Scotland, but in the days of our forefathers it possessed all the importance of a festival; "a dry funeral" being considered unlucky. Not only ale and porter, but whisky and rum, port wine and sherry were provided in quantity and in quality corresponding with the social standing of the deceased. To such an extent indeed was drinking sometimes carried that there are instances on record of the procession reaching the graveyard without the corpse, the coffin having been left by drunken inadvertence at some stage in the way. Once the grave has been filled in over the dead, it is still customary for the relatives and friends to return to the after funeral feast, where intoxicants are rarely altogether absent.

Notes on the Flora of the Moffat District.

By Mr J. THORBURN JOHNSTONE.

The Moffat district, from its geographical position and natural surroundings, has a flora of an interesting and unique character for a lowland district, being unusually rich in Alpine and sub-Alpine forms, which find a fitting habitat among the wild, bare, rocky crags and bleak ravines of Blackshope, Corrieferron, Loch Skene, Midlaw Burn, &c. It also forms the connecting link between the floras of the Cumberland and Westmoreland highlands in England on the one hand, and that of Perth and Forfar in Scotland on the other, and this even though our hills are not the highest in the South of Scotland, yet an examination of the Society's list of plants shows that the Moffat hills are a safe retreat and a sure one for a larger number of the rarer plants than these higher hills. Notwithstanding the richness of our flora, the literature regarding it is of a very limited and meagre description, and with the exception of some isolated references in some of the Botanical Societies' transactions and the "Statistical Account of Scotland for 1843," it may be said to be the work of one individual, a native of the district—viz., the late Mr John Sadler, curator of the Edinburgh Botanic Gardens. As far back as 1857 and 1858 Mr Sadler gave the result of his botanical researches in the district in the columns of the *Moffat Register*, the local newspaper at that time, and he likewise published about

that time a small book entitled "Ramble among the Wild Flowers"—this being a pleasantly-written narrative of a three days' botanical tour from Edinburgh and back by way of Peebles, Manor Water, St. Mary's Loch, Grey Mare's Tail, Loch Skene, Corrieferron, Moffat, Deil's Beef Tub, and Tweedsmuir. At the end of the book he gives a list of plants to be found in the neighbourhood of Moffat. This list was copied into the Moffat Guide-book at that time as a section on the botany of the district, and has been continued in it without any alteration till two years ago, when a new and more extensive list, compiled by myself, was substituted. In the original list Mr Sadler enumerates nearly 150 flowering plants, 28 ferns, clubmosses, and horsetails, besides a number of mosses. This list, while it is a small one numerically, shows that Mr Sadler had been very familiar with the plants of the district, and had botanised it thoroughly, for the list contains the names of nearly all the rare plants found now in the district and a few which still elude re-discovery; but every season is seeing the number of these being gradually reduced. At the present time these unreconfirmed plants of the Moffat flora are represented by the following list:—*Cardamine imptiens*, L.; *Genista Anglica*, L.; *Vicia Orobus*, D.C.; *Epilobium Alpinum*, L.; *Scutellaria Galericulata*, L.; *Salix Lapponum*, L.; *S. Myrsinites*, L.; *Juncus Trifidus*, L.; *Carex Rupestris*, L., on Sadler's authority. While *Lychnis Viscaria*, L.; *Alchemilla Alpina*, L.; *Saxifraga Aizoides*, L.; *Veronica Saxatilis*, L.; *Tofieldia Palustris*, Huds.; *Juncus Triglumis*, L.; and *Juncus Castenus*, Sm., are on the authority of the "Statistical Account of Scotland for 1843." This list for the "Statistical Account" was prepared by the Rev. Dr Singer, minister of Kirkpatrick-Juxta at that time. *Saxifraga Aizoides* has been found since that time by the Rev. Wm. Bennet, Moffat, but a good many years ago, and I have failed to find it at the place where Mr Bennet told me he had gathered it. *Andromeda Polifolia*, L., has the Rev. John Pagan, Bothwell, for its authority.

I have no doubt that the majority of these plants are still in the district. Why they have not been rediscovered is simply the want of searchers for them. Since Mr Sadler's time no systematic attempt has ever been made to botanise the district, and even the casual visits of botanists to the district have been very few, and their operations have never been extended to where these

plants were likely to be found. That this is so can easily be understood when I mention that since the formation of a Naturalists' Field Club (now extinct) in Moffat in May, 1886, which gave an impetus to the pursuit of botany here, the stations for 55 plants given in the Society list on the authority of Mr Sadler and the "Statistical Account of Scotland" have either been reconfirmed or new ones given for them. While stations have been found here for about 40 plants (omitting those marked common and general) which have no station given in the Society's list for this district, and at least 10 new plants have been added as new records for the county.

These results show that there is no necessity for excluding the majority of the unreconfirmed plants from the list, as some of your members have ere now suggested. Those members ought at least to make a personal effort to verify their presence or otherwise first; and having done this and failed, it will be time enough then to consider the expediency of expunging them from the list. A few notes on some of the most interesting of the reconfirmed plants may not be amiss, and for easy reference I will follow the sequence of the Society's list. *Aquilegia vulgaris*, L., still retains its ancient habitat at Garple, while a new station has been found for it in a small rivulet on the Granton Hill. *Cerastium Alpinum*, L., Blackshope and rocks at Loch Skene. *Vicia sylvatica*, L., is still to be found at the Grey Mare's Tail, but it is now rather scarce. *Saxifraga oppositifolia*, L., has one station only, but it is fairly abundant at it. *Epilobium angustifolium* is also found at Blackshope and Corehead; while *E. alsinefolium* Villars is also common in Blackshope, Corrieferron, and Grey Mare's Tail. *Galium pusillum*, which appears in the Society list on Mr Sadler's authority, is common at the Grey Mare's Tail, Corrieferron, &c. This plant will require to have its name changed to *Galium sylvestre*, Poll. Messrs E. F. and W. R. Linton, in a paper which appeared in the *Journal of Botany* last June, gave *Galium sylvestre*, Poll., Grey Mare's Tail, as a new record for the County of Dumfries. I drew Mr E. F. Linton's attention to the *Galium pusillum* in the Society's list, and asked him if it was not the same plant as *sylvestre*. His reply was that *G. sylvestre*, Poll., was formerly known to Don and Smith as *G. pusillum* by an error, but it was not the *G. pusillum*, Linn., which was not a British plant; and he had no doubt Sadler must

have meant the same plant as he did. *Saussaurea Alpina*, D.C., has at least three stations in the district, one of them being in Blackshope. *Hieracium pallidum* I gathered two years ago at Craigmichen Scaurs, and *Hieracium Iricum*, Fr., Blackshope, Grey Mare's Tail, &c., was gathered by the Messrs Linton last summer as it had formerly been by Mr J. Backhouse (see monograph). The *Pyrolas media*, Swartz, and minor, L., are fairly common in our linnis. While I know only one station for the rare *Pyrola secunda*, L., which I gathered in flower at the end of June this year for the first time, at a new station between 8 and 9 miles distant from any of its previous recorded stations, at which places it is not now to be found. *Myosotis caespitosa*, Schultz, common in all the springy places on the hills and damp roadsides. *Stachys betonica*, Benth., I only gathered on September 7th for the first time, also at a new station. There would be less than a dozen plants of it growing at this place, and it is not now found at its previous recorded stations. *Polygonum viviparum*, L., rocks at Loch Skene, where it was gathered by Mr Scott-Elliot in the month of July this summer. *Oxyria reniformis*, Hook, one of the commonest plants in Blackshope, Corrieferron, Grey Mare's Tail. I note that in the Society list this plant is favoured with four different authorities; while this plant, along with *polygonum viviparum*, are claimed as new records for Dumfries in 1888. (See proceedings of the Botanical Society for 1888; notes on the records of Scottish plants for 1888, by A. Bennet, Esq.) *Carex Atrata*, L., and *Carex Capillaris*, L.—these rare Carices were re-discovered by Mr Linton near Loch Skene in July this year. I observed *Atrata* at the same place in September, but *Capillaris* had seemingly died down, as I did not see it. *Carex Rigida*, very common on the very top of Hartfell. Of plants found here which have no station given in the Society list from here are such plants as:—*Fumaria Capreolata* and *F. Officinalis*, corn fields and waste ground; *Corydalis claviculata*, D.C., common in woods; *Silene inflata*, Sm., railway embankment and at Hunterheck; *Lychnis Vespertina*, railway embankment; *Sagina nodosa*, Meyer, Craigmichen Scaurs.—*Geranium Lucidum*, L., found growing on rocks at the Deil's Beef Tub—the specimens gathered there are very small; it also occurs on the Selkirk roadside, nearly $3\frac{1}{2}$ miles from Moffat. *Ulex Gallii*, Planche, sandbed, Annan Water, Nethermill ground, and Com

monside. *Poterium officinale*, Hook, Annan Water at Barnhill, *Rosa spinosissima*, Linn., occurs in Corrieferron at an elevation of 1250 feet. *Rosa Mollissima*, Wild, Adam's Holm. *Carduus heterophyllus*, L., common on Evan Water. *Hieracium crocatum*, Fries., Spoon Burn. *Senecio sylvaticus*, L., is very common in this district, while *Senecio viscosus*, which is marked very rare in the Society list, occurs on the railway sidings and waste ground about Beattock Station. *Calamintha Clinopodium*, Benth., Moffat Water and Grey Mare's Tail. *Lamium album*, L., occurs round the ruins of the Old Chapel at the farm of that name, and is the only station for it here that I know of; it is quite plentiful there, but it does not seem to spread away from its original habitat. *Juncus supinus*, Moench., rare in the Society list, occurs in the ditches above Moffat mineral well. *Carex aquatilis*, var. *minor* Boot., Corrieferron. *Carex ampulaceae*, Good, Well Hill.

Of plants which are new records for the county, and plants which do not appear in the Society list, but which have been found in other parts of the county, and which have also been gathered here, occur the following:—*Corydalis lutea*, D.C., Annan Water at Beerholm; *Teesdalia nudicaulis*, R.Br., sandbeds on Evan Water and Annan Water on Holms and Beerholm ground; *Sagina procumbens*, var. *Spinosa*, Gibs., roadside near Deil's Beef Tub—new record for county, August 4th, 1889; *Rubus Idæus*, var. *Leessii*, Bab—this was discovered here for the first time by Mr Craig-Christie, Edinburgh, in July, 1887; *Rubus Koehleri*, Weihe, var. *pallidus*, Bab., copse, Moffat Water—Messrs Linton in *Journal of Botany* last June; *R. Lindleianus*, Moffat Water, Messrs Linton, 1890; *Potentilla Alpestris*, Hals-fils, gathered June 22nd, 1890, by myself at Blackshope, and now recorded for the first time for the county—another station has been found for it here since then, at Midlaw Burn; *Potentilla procumbens*, Sibth, roadside, New Edinburgh Road; *Rosa Canina*, var. *lutetiana*, Leman, Adam's Holme; *Saxifraga nivalis*, Linn., July 31st, 1889, at Blackshope, only station, and will not number over a dozen plants, growing in the shady recesses of a damp rock. Among the *Heiracia* a number of new finds have been recorded. *Heiracium Auratum*, Fr., Moffat Water; *H. Sparsifolium*, Lindeb, Craigmichen Scaurs—these two are not new to the county, as, I believe, they had been previously gathered in

the Sanquhar district by Dr Davidson; while in the *Journal of Botany* for June last year the Messrs Linton record *Heiracium Argentum*, Fr., and *H. Prenanthoides*, Vill., for the Grey Mare's Tail. The Messrs Linton spent four days at Moffat again this summer botanising among the *Heiracia* principally. I accompanied them to Craigmichen Scaurs and Blackshope, and Mr Scott-Elliot, who was staying at Moffat at that time, also accompanied us one day to Spoon Burn and Corrieferron. During this visit a number of what I believe will turn out to be new *Heiracia* for Great Britain were gathered, but in a note I had lately from Mr E. F. Linton, he says it will be some time before they are able to publish the results of their visit, as a number of them require to be sent to Dr Lindaberg at Stockholm for examination. *Ajuga pyramidalis*, L., Blackshope, June 17th, 1888, a new record for the county at that date, and is the only station and very few plants. Among the willows also a few additions can be made to the Society's list. *Salix alba*, L., var. *Vitellina*, L., Hydropathic grounds, where it has been planted; *Salix triandra*, L. var., Annan Water at Putts; *Salix Cinera* X. *nigricans*, Gudeshaw Wood; *Salix phylicifolia*, L., Beerholm; *S. nigricans*, Sm., Blackshope; and *S. Ambigua*, Ehsh, Annan Water at Putts. Where I have given no name as the authority for a plant it has been gathered by myself. In the grasses I have nothing new or rare to record, simply because I have not gone in for collecting the carices and grasses; and I must express my indebtedness to Mr E. F. Linton for examining and naming the plants of these two orders I have already by me, and also for naming the *Hieracia* and *Salix*. And as the *genera rubus* and *rosa* are also practically untouched, these, along with the grasses, &c., will take a lot of working up in the future for any one who has got leisure or interest in the matter; indeed, the whole district can stand a lot of botanising yet. And in concluding I may state that the number of plants now on the list I have made up for this district is 446 flowering plants and 41 ferns and varieties of ferns, equisetums and club-mosses, all of which, with the exception of less than 20, have been reconfirmed for the district within the last three years. In fact, specimens of the greater number of them can be seen in my own collection.

9th January, 1891.

MR JAMES BARBOUR, V.P., in the Chair.

New Members.—Mr Andrew Noel Agnew, Mr James H. Barbour, Dr Hugh Cunningham, Mr Joseph Duff, Mr Kevin Emmet O'Duffy, Mr Robert Threshie Reid, M.P.

Donations.—Seven botanical papers by Mr Arthur Bennett, F.L.S., of Croydon, Honorary Member; The Essex Naturalist, October and December, 1890; Stirling Natural History and Archæological Society's report for 1889-90. On behalf of Mr David Matheson, Superintendent of the Savings Bank Department of the Canadian Post Office, Mr Lennox presented a pamphlet by the Rev. Dr Duncan, published in 1815, containing the rules and Regulations of the Dumfries Parish Bank.

COMMUNICATIONS.

I. *Observations on the Meteorology of Dumfries for 1890.*

By the Rev. WILLIAM ANDSON.

Barometer.—The highest reading of the barometer was recorded on the 23d February, when it rose to 30·724 inches, the highest reading for five years, with the exception of 5th December, 1889, when it was 30·725 in. The lowest reading was on the 6th November, a day of extraordinary rain and storm, when it fell to 28·600 in., the lowest reading since 3d November, 1887, when 28·537 in. were registered. Between 9 a.m. and 9 p.m. of the 6th there was a fall of the mercury to the extent of fully an inch, from 29·637 in. to 28·600 in., and the rainfall was the heaviest recorded for the five years that observations have been taken at this station. The annual barometrical range was 2·124 in., and the mean pressure (reduced to 32 deg. and sea level) was 29·899 in., which is slightly under average. There were four months in which the mean pressure exceeded 30 inches—viz., February, September, October, and December, and these were exceptionally dry and quiet months, during which anti-cyclonic conditions for the most part prevailed, with their usual accompaniments of light winds and rainfall under average. The months in which the fluctuations of the barometer were greatest, with stormy and unsettled weather, were January, March, and November.

Temperature.—As regards the temperature, the year has been somewhat peculiar. For example, the highest single reading of the thermometer was not in June, July, or August, as is usually the case, but on the 23d May, when it was 75·2 degs., the next highest being 74·5 degs. on the 7th August, and 74 degs., on the 7th September. The proper summer months of June and July were unusually deficient in sunshine and warmth, with a remarkable prevalence of rainy days, numbering 22 in each, and the inevitable result of low temperature for the season of the year. The mean maximum or day temperature of June was 7 degs. below average, and that of July 4 degs. In the former month the thermometer never reached 70 degs., and in the latter only thrice, the highest reading being 71·5; whereas in the latter part of May there were also three very warm days, with a maximum range from 70·5 to 75·2 degs.; in August, seven, ranging from 70 to 74·5 degs.; and in September, seven, ranging from 70·1 to 74 degs. The highest mean temperature occurred in the month of September—viz., 58·3 degs., as compared with 55·6 degs. in June, 56·5 degs. in August, and 57 degs. in July. As regards the winter months, January was exceptionally mild and open, with a marked prevalence of southerly and south-westerly winds, and a mean temperature of 41·9 degs., being about 4 degs. above average. The mean temperature of February was 37·9 degs., nearly 2 degs. below average, but almost the same as in 1889. The coldest month of the year was December, with a mean temperature of only 33·5 degs. In this month there were seven days on which the maximum readings were under the freezing point, and as low as 27·2 degs. on the 13th; while there were nineteen nights of frost with an aggregate of 95 degs. The lowest temperature of the year was recorded on the night of the 13th or morning of the 14th December, when the sheltered thermometer registered 19 degs., and an exposed thermometer on the grass registered 11·5 degs. In the end of October there was a spell of severe cold, the sheltered thermometer falling as low as 23·7 degs. on the 28th; and the same thing occurred in the end of November, from the 26th to the 29th, the readings ranging from 28·5 degs. to 23·3 degs., but otherwise the temperature of these months was above average. With our recollections of the wet and inclement weather of the summer months, and the persistent frost of December, it might have been supposed that the

mean temperature of the year, taken as a whole, would have been decidedly under average, but these backward influences were so far compensated by the mildness of January and March, and the unusual warmth which characterised the end of May and the whole of September, along with a considerable part of October, that the annual mean (47·8 degs.) is higher than that of the previous four years, with the exception of 1889, when it was 48·1 degs. In 1888 it was 46·5 degs.; in 1887, 47·2 degs.; and in 1886, 46·2 degs. A comparison of the mean annual maxima and minima of 1889 and 1890 shows that the higher mean temperature of the former year was due to an excess in the day temperatures—for while the annual minimum is the same for each year—viz., 40·9 degs., the annual maximum is for 1889, 55·1 degs.; and for 1890, only 54·4 degs. Over Scotland generally there seems to have been a slight excess of warmth over the average; but in England, especially in its southern and south-eastern districts, there appears from the reports that have been issued to have been a deficiency.

Rainfall.—The total rainfall of the year was 35·72 inches, as compared with 35·17 inches in 1889, 35·91 inches in 1888, 30·99 inches in 1887, and 40·13 inches in 1886. The heaviest in 24 hours was on 6th November, when the gauge registered 2·17 inches. The rainiest months were January and November—the former with a record of 5·32 inches, which fell in 25 days, and the latter of 6·93 inches, spread over 22 days. June and July were also remarkable for the number of days in which rain fell—22 in each; but the amount was not much in excess of what is usual in these months, at least as far as July is concerned. Both months were characterised by cloudy skies and frequent showers, with consequent low temperature; but there were few heavy downpours of rain, such as frequently occur in the summer months. The driest months were February and December, with a record of less than one inch for each—February 0·86 in., December 0·97 in. It is worthy of remark that the whole rainfall of these two months—viz., 1·83 inches—was less than the amount which fell on the single day in November before referred to, when 2·17 inches were recorded. The total number of days in the year on which rain fell was 208, as compared with 202 in 1889, 195 in 1888, and 181 in 1887. There was a remarkable absence of snowfall during the year. Only once or twice was

there a slight covering on the lower grounds, though on several occasions in January and March and in the end of October and November snow fell on the hills. In other parts of the country, however, and particularly in the northern and eastern districts and over England, snowstorms of considerable severity were experienced, both in March and April and in November and December.

Hygrometer.—The mean of the dry bulb thermometer for the year was 46·9 degs. ; mean wet, 44·7 degs.; dew point, 42·3 degs. ; relative humidity (saturation = 100), 84. The thermometer readings are a fraction lower than in 1889, and the difference 2·2 degs. instead of 2·4 degs. The relative humidity is 2 per cent. greater—84 instead of 82.

There were no very severe thunderstorms in 1890, but thunder was heard, accompanied with lightning in most instances, but not in all, on the following dates:—January 5th and 18th, May 6th and 18th, June 27th and 29th (thunder only), July 2d (thunder only), 4th and 15th (thunder with lightning), August 29th, September 20th, and November 10th (thunder with lightning).

Wind.—The prevailing directions of the wind during the year were as follows:—From an easterly direction, including E., N.E., and S.E., it blew 96 times; from a westerly direction, including W., S.W., and N.W., it blew 208 times; from due N., 22 times; from due S., 24 times; and calm or variable, 15 times.

II. *The Remnants of an Ancient Language.*

By MR PATRICK DUDGEON.

O.N., Old Norse; A.S., Anglo-Saxon; O.Sw., Old Swedish; Yk., Yorkshire; Sc., Scotch; Fr., French. There is much interest in following up to its source a language now only existing in a very mutilated state, but which was at one time current over a considerable portion of England and part of Scotland. The few notes now presented refer to our "Scottish vernacular," and its close connection to the dialect spoken over a great part of Yorkshire. The term dialect must be used with some reservation in speaking of the "Folk speech" of Yorkshire and the south of Scotland, for it is really the remains of the language of the ancient Northumbrian kingdom. Though now almost expiring, and being every day less and less used even by the country

people, and being constantly "contaminated," by influences of various kinds, a great deal of it remains, as may be seen by the diligent searcher, in words, idioms, and forms of thought, that is well deserving of attention. We in Scotland owe a deep debt of gratitude to such writers as Burns, Scott, and many others, whose immortal writings will for ages keep alive amongst us many of the words and idiomatic turns of language current in the old Northumbrian kingdom. In this respect, Yorkshire has not been so fortunate; there appear to be no great authors from that district, such as I have mentioned we have, whose writings in the vernacular are at all likely to be perpetuated. Our country, too, has been more prolific in ballads and songs than any other part of the kingdom, containing abundant remains of the old language, which can never be lost; and so, although the *spoken* language, the remains of the Old Northumbrian tongue, which was in almost general use in the time of our grand and great-grandfathers, is a thing nearly of the past, and is fast disappearing even amongst the country folks, yet our ballads, songs, Burns, Scott, and the works of many other Scottish authors will for ever keep it alive as a *written* language. The ancient kingdom of Northumbria, at one time the greatest and most powerful of the kingdoms into which the country was divided, extended from the Humber to the Forth. The Teutonic races, Engles, Saxons, and others, who invaded the country after the Roman evacuation utterly annihilated or drove the remnants of the inhabitants into the most inaccessible parts of the land, and founded the kingdom of Northumbria, which existed for more than 300 years. The Danes and Norsemen, other branches of the Teutonic race, in their turn occupied the country until subdued by the Norman conquest. The Normans, however, made little or no impression on the language of the northern parts of the country. At various times the kingdom was extended in sundry directions, or, at all events, they exercised supremacy over other parts of Britain for longer or shorter periods. We find at one time the country from the German Ocean to the island of Anglesea under their sway; cutting off the southern part of the Strathclyde kingdom, which at one time extended as far south as Warwick, they invaded and occupied the south-west part of Scotland—Ayrshire, Dumfriesshire, and Galloway. How long they occupied this part of the country is

somewhat uncertain—long enough, however, to leave their mark in our local nomenclature, as we are reminded of by the names Thor, Wald, Wick, Fell, Dal, &c. This short sketch has been given for the purpose of pointing out the firm hold these various Teutonic races had upon the north-east of England, and what is now called the lowlands of Scotland. The conquering races having utterly exterminated the former inhabitants, the Britons, their language was entirely freed from any chance of intermixture from the conquered race, and it is to the remains of this old language I intend, very shortly, to direct your attention. Of course, it was to have been expected that the two districts deriving from the same source, although kept in a great measure apart for now nearly 900 years, should have a good deal in common, but I was not prepared to find that after a lapse of so long a time the two dialects should in so remarkable a manner resemble each other, and that so many hundreds of words should be in common use in both dialects, although quite obsolete in other parts of the country; and not only words, but the idioms, modes, and turns of expression, proverbial sayings and phrases, and the use of a number of words found in our current literature, but which have lost their original meaning in a great degree, are still in use, retaining in a great measure their primary signification. My attention was called more particularly to the subject by seeing an admirable and exhaustive work lately published, "A Glossary of the Cleveland Dialect," by the Rev. J. C. Atkinson, LL.D. On going through the Glossary I find, on a rough estimate, upwards of 1500 words obsolete in most other parts of the kingdom, including words above referred to as retaining their primary meanings, common to both districts. A few of these words, phrases, idioms, &c., may be given as examples. The changes in our language between the times of Chaucer and Spenser are very marked, and between the latter and our own time nearly as great. I, of course, refer to the current literature of the different periods. But the two districts I have in view—the Lowlands of Scotland and Yorkshire—have been much more conservative in this matter than any other parts of the country; many words used by Chaucer have a lively existence at the present day in these districts. I need only refer to one or two instances out of many that might be adduced. "Brat," now signifying a child's pinafore, is used by writers about Chaucer's

time in the sense of a cloak, or outward covering. A.S. *brat*, a cloak, a clout.

“ Which that thei might wrappin hem in a night,
And a *bratte* to walken in a daie light.”

Sc., “ Her bits o’ *brats* are fairly worn through, though she keeps up an appearance of gentility.”

“ Pick,” pitch.

“ Anoynt the ship with *pick* and tar,
Without and als within,
The water out to spar.”

“ Shog,” to shake somewhat roughly.

“ *Shog* him welle and let us lyfte.”

We have it in our popular rhymes—

“ Big it in a bog.
Where it will neither shake nor *shog*.”

“ Bugg,” a ghost, now altered to bogle, is common in both districts. The passage in what is called the “ Bug Bible,” Ps. xci. v. 5—“ Thou shall not be afraid for the *bugges* by night,” &c., is an instance of the use of this word. In words common to both districts I may give as a few examples, out of hundreds that might be adduced—“ Fike,” O.N., *fika*; O.Sw., *fikia*, to bustle; a Yorkshireman says, “ T’ puir bairn nobbut *fikes* wi’ his taes;” we have “ When she tak’s on her *fickie fykes*.” “ Deave,” O.N., *deyfa*, to deafen, to stun; Yk., “ A din fit t’ *deave* yan;” Sc., “ Whist, woman, whist! dinna *deave* the gentleman wi’ your havers.” “ Gate,” “ Gait,” O.N., *gatta*, a road, a way; Yk., “ Let him gan his awn *gate*;” Sc., “ Let him gang his ain *gait*.” “ Sark,” O.N., *serker*, shirt; Yk., “ Strippit tiv his *sark* sleeves;” Sc., “ I’ll gie ye a *sark* fu’ o’ sair banes.” Amongst the phrases common to both districts are “ Tak tent,” “ What for no,” and various others. One word in the Glossary struck me as being very interesting in its derivation. “ Danish,” “ Densh,” “ fastidious, dainty, nice; we have it in the form of Dainshock* (pr. danish), nice, prim; “ A *dainish* bit body.” I am not sure I have heard the word used in this quarter. It is common on the east side of the country. Atkinson, quoting Wörsaae, says, “ So long as the Danish supremacy lasted (in England), the Danes, naturally, could only carry themselves as lords in a conquered country. Their innate taste for magnificence and luxury

* The diminutive “ oek ” has evidently been added here.

was abundantly fostered, and their pride was flattered by the subjugation of the Anglo-Saxons. The old English chronicles contain bitter complaints, touching the humiliation the natives were exposed to. Thus, if an Anglo-Saxon chanced to meet a Dane upon a bridge, he was obliged to wait in a posture of lowly reverence—nay, even if he were on horseback he was obliged to dismount until the Dane had crossed over." Atkinson observes, "Verily, the Dane might be looked upon as 'particular' or 'nice' under such circumstances, and his generic name Dansk passed into a word expressive of such characteristics. In the idioms and modes of expression there is a remarkably similarity—"to *sit* upon one's knee, *i.e.*, to kneel." Chaucer has—

"And doon anon he *sitte* him on his knee."

"To *sit* up on end," in contradistinction to reclining; "I'm *doubtful* it'll rain afore night;" "He has been sair *handled* wi' the cauld;" "I's *jealous* he's after nae guid." We also find words common in our current literature, but used much more in accordance with their use in olden times—"Fetch," in the sense of to carry—"bid him *fetch* it;" "Few," used as a quantity or number—"there was a good *few* at the kirk;" "Reach," to hand a thing to another—"reach me yon spade;" "Pit," to match—"thae twa dog's weel *pitted*;" "Even," to compare, to liken—"I wad ill like tae *even* her wi' Jean." The adverb "out" is used as in *out-by*, not far off, just outside; *out-gang*, the way out, an outlet; *out-ganging*, going out of doors; *out-gate*, a way of egress; *out-ly*, thoroughly, fully; *out o' fettle*, out of repair, health, &c. The preposition "by" may be taken as another example—*By-gang*, a by-way; *by-passed*, used in reference to past time; *by the time*, past the time—"They're lang *by* their time." All the above phrases and use of particular words are identical in both districts. Words are used as augmentatives in both districts, not commonly used as such elsewhere—"Fearful," most *fearful* bonnie; "Desperate," most *desperate* kind; "Terrible," most *terrible* sweet; "Dungeon," a *dungeon* o' wit. The "slang" language of the present day is introducing augmentatives of this kind. A young lady was heard to say the other day, "it was *ripping* fun;" and it is somewhat curious to notice that the present use of the slang word "Fit"—I heard a lady say she "felt very *fit*"—is a reverting back to its old Teutonic application. In Yorkshire they would say—"Weel,

ah's about *fit* for my dinner ;" Sc., " Weel, I'm about *fit* for my dinner," " bed," " tea," &c.

III. Report by Mr GEORGE F. SCOTT-ELLIOT, B.Sc., on Mr Carruthers' Donation.

Mr Wm. Carruthers has very greatly benefited the Society by the very valuable series of plants in this collection. Members of the Society who will inspect the specimens in the Herbarium will see that they are of the very greatest importance. It is, of course, possible to get specimens of British plants without much trouble, but the importance and value of these specimens lies in the fact that they are in almost every case named by the very best authorities on English Botany. There are amongst them plants named by Mr C. Bailey, Mr A. Brotherston, Mr W. P. Hiern, and other eminent botanists, and many of the sheets have an antiquarian and autographic value which can only be appreciated by examination. Moreover, in point of mere numbers, this collection has at once given a completeness to our Herbarium which I had never dreamed of its attaining, and many of the specimens are of plants so rare that it would have been impossible for us to obtain them in any other way.

6th February, 1891.

Major BOWDEN, V.P., in the Chair.

New Members.—Mr Alexander Bryson, Rev. John Cairns, Mr James Carmont, Mr Philip Sulley, Mr Alexander Turner.

Donation.—The North American Fauna, Nos. 3 and 4, from the United States Department of Agriculture, Washington.

COMMUNICATIONS.

I. *References to the Dumfriesshire Flora in Shakespeare and Burns.* By Mr JAMES SHAW (abridged).

In the following brief list I have confined myself to such wild flowers as are in our district, and I have arranged the matter alphabetically :—

The *Anemone*, or wind-flower, called by Dumfriesshire school

children "wild snowdrops," is referred to in "Venus and Adonis" as springing up from the blood of the latter.

"A purple flower sprung up, chequered with white."

Again it is made to spring from the tears of Venus.

"And where a tear has dropped a wind-flower blows."

Columbine.—Ophelia says to Hamlet—

"There's fennel for you and columbines."

The columbine signified ingratitude. When Ophelia became crazed she had garlands.

"There with fantastic garlands did she come
Of crow-flowers, nettles, daisies, and long purples."

The crow-flower in those days was "ragged robin."

"When daisies pied and violets blue,
And lady-smocks all silver white,
And *Cuckoo-buds* of yellow hue
Do paint the meadows with delight."

Love's Labour's Lost, V., 2.

Commentators are uncertain concerning these cuckoo-buds, but it is referred to one of our yellow ranunculuses.

King Lear was met (IV., 4)

"As mad as the vexed sea, singing aloud ;
Crowned with rank fumiter and furrow weeds,
With burdocks, hemlock, nettles, *cuckoo-flowers*,
Darnel, and all the idle weeds that grow
In our sustaining corn."

Cuckoo-flowers are said to be like crow-flowers, a name for our "ragged robin." *Darnel* does not grow in our county, but the others named can be easily recognised.

Elder, that is our "Boor-tree." According to superstition, Judas was hanged on an elder. Shakespeare makes it an emblem of grief.

Cymb. IV., 2.

"Grow patience !
And let the stinking elder, grief, untwine
His perishing root with the increasing vine."

Fern.—It was a curious notion that fern seed was supposed to have the power of rendering persons invisible.

I. Henry IV. (II., 1).

"We have the receipt of fern seed, we walk invisible."

Harebell.—This flower (Cymb. IV., 2) is considered our own *craw-tae*.

“ Sweet the *craw-tae*’s early bell
Decks Gleniffer’s dewy dell.”

Tannahill.

In Shakespeare it is associated with another spring flower.

“ Thou shalt not lack
The flower that’s like thy face, pale primrose, nor
The azured harebell, like thy veins.”

Hemlock.—In “Macbeth” we have—

“ Root of hemlock digg’d i’ the dark ”

among the horrid ingredients of the witches’ cauldron. Its scientific name *Conium* means a cone or top, whose whirling motion resembles the giddiness its poisonous juice produces.

Holy Thistle.—This is the *Carduus Benedictus* found growing on the banks of the Euchar, Sanquhar, perhaps its only inland station in our county.

“ Get you some of this distilled *Carduus Benedictus* and lay it to your heart ; it is the only thing for a qualm.”

Much Ado, &c., III., 4.

Ivy.—It was a custom to hang a bush of Ivy at a vintner’s door. Hence the illusion to it in “*As you like it*.”

“ If it be true that good wine needs no bush, ’tis true that a good play needs no epilogue.”

Polygonum Aviculare, or “Knotgrass.”

“ Get you gone, you dwarf,
You minimus of hindering knotgrass made, you bead, you acorn.”

Midsummer, &c., III., 2.

Lady Smocks.

“ And lady smocks, all silver white.”

This seems to mean our *Cardamine pratense*. Gerald says—

“ It flowers in April and May.”

Long Purples.—These are generally considered to be the early purple orchis. In Tynron they are called “bull-dairies.” Shakespeare also calls them “Dead men’s fingers,” from the pale colour and hand-like shape of the tubers.

“ Our cold maids do dead men’s fingers call them.”

One would have guessed these to have been fox-gloves, known in Scotland as “Dead men’s bells.” But that would not suit Ophelia’s garland, containing a yellow ranunculus, for the

ranunculus family is early, whereas the fox-glove is rather a July flower.

Marigold.—There was a curious notion that this flower opened or shut with the sun.

“The marigold that goes to bed with the sun and with him rises weeping.”
Winter's Tale, IV., 3.

“When winking Mary-buds begin
To ope their golden eyes,
With everything that pretty bin
My maiden sweet arise.”

Cym., II., 3—Description of morning.

Plantain.—This plant was valued because of its supposed healing virtues for wounds.

Rom.—“Your plantain leaf is excellent for that.”

Benvolio—“For what, I pray thee?”

Rom.—“For your broken skin.”

In Scotland a leaf of the plantain, called the *waeburn* leaf, or *waybread* leaf, used to be wrapped round a toe with a corn to mollify the pain thereof.

Rosemary, or as it is called *Sweet Mary* in Dumfriesshire, is an old-fashioned garden perennial. It is a Labiate, but comes from the Mediterranean basin. In Shakespeare's time it seems to have been a symbol for memory.

“There's rosemary, that's for remembrance.”

Hamlet.

In “*Winter's Tale*”—

“For you there's rosemary and rue, these keep;
Seeming and savour all the winter long.
Grace and remembrance be to you both,
And welcome to our sheep-shearing.”

Rush.—Rushes were strewn upon floors previous to the introduction of carpets. In “*Cymbeline*”—

“Tarquin thus

Did softly press the rushes.”

In “*Henry IV.*”—

“She bids you in the wanton rushes lay you down and rest your gentle head upon her lap.”

Vide also “*Romeo and Juliet*,” I., 4. The “rush candle” is mentioned in the “*Taming of the Shrew*.”

There is a funny illusion to the *Hawthorn* in “*A Midsummer Night's Dream*”—

“This man, with lanthorne, dog, and bush of thorn represented Moonshine.”

We have all heard of the "Man of the Moon."

Violets.—The violet was an emblem of early death.—*Pericles*, IV., 1.

In "Winter's Tale" there is a beautiful allusion to them—

"O, Proserpina,
For the flowers now, that, frighted, thou lett'st fall
From Dis's waggon! daffodils
That come before the swallow dares and take*
The winds of March with beauty; violets, diin,
But sweeter than the lids of Juno's eyes,
Or Cytherea's breath; pale primroses
That die unmarried, ere they can behold
Bright Phœbus in his strength; bold oxlips and
The crown-imperial; lilies of all kinds,
The flower-de-luce being one."

I must dismiss Burns with a very few words. Everyone has admired his poem on the *Daisy*, his comparison of the pleasures of life to the evanescent bloom of *poppies*, his lone glen o' green *brackens*, wi' the burn stealing under the lang yellow *broom*, the *rose* and the *woodbine* twining along the banks of Doon, the fragrant *birk*, the *hawthorn* hoar that mingled together overlooking the stream of the Ayr. In the matter of flowers, however, he was a poet first and a florist afterwards. He pulls a posie for his ain dear May, but it is an ideal posie, impossible in nature. He puts into it the primrose and the rose. He places the hyacinth beside the hawthorn, entirely regardless of times and seasons. At the same time, in his "Lament of Mary Queen of Scots," there is tender pathos in the references to spring flowers she can neither see nor enjoy, although there is again inaccuracy in having the slae and the hawthorn blooming simultaneously. His fervid allusions to our Scottish heather are also dear to our hearts, while his pithy song of "Green grow the rashes" is rooted in our memories. On New Year's Day, 1789, he addressed a letter to Mrs Dunlop. "I have some favourite flowers in spring, among which are the mountain daisy, the harebell (here he evidently means the blue squill or hyacinth of our woods), the fox-glove, the wild brier rose (here he gets mixed, putting in summer blooms), the budding birch, and the hoary hawthorn, that I view and hang over with particular delight." In all these cases the intensity of emotion created by these beautiful objects of nature in the poet's breast must more than excuse any inaccuracy in observation.

* Charm.

II. *Further Original Letters, &c., of the Burns Period.*

By MR JAMES R. WILSON.

Mr Wilson stated that he had discovered these letters among the papers of the late Dr Grierson, Thornhill, and although they were scarcely of the same literary merit as those he made public last year, they were still of considerable value to all interested in the literary characters of the Burns period, and of the early part of this century. The members were, of course, aware that there were in the museum in Thornhill many relics of Burns and of his associates. In particular and most prized of all there was a copy of "The Whistle" in the poet's own hand-writing, bearing the following note by Mr William Grierson, the doctor's father:—
 "Received a present of this poem, which is in the hand-writing of the poet, from his brother Gilbert Burns, enclosed in a letter dated Grant's Braes, 14th December, 1815.—William Grierson." On opening the case in which the poem is preserved the letter referred to was found. It is most interesting, and shows clearly the known sagacity of the writer. This is the letter:—

Grant's Braes, 14th Dec., 1815.

Dear Sir,—A thousand times have I reproached myself for being so long of acknowledging receipt of your obliging letter by Mr T. Sibbald, with the very elegant engraving accompanying it (an engraving of the mausoleum), but I have been much and disagreeably occupied of late with sequestrating stock and crop, attending meetings of creditors, the sale of bankrupts' subjects, &c.

"Peace and plenty," formerly the toast and wish of the ill-advised, have come upon us with a vengeance, and their ill effects are felt particularly severe in this county of wheat—almost exclusively devoted to corn farming—and I have not seen the country in general in such a depressed desponding state since the conclusion of the American War. Not after all but we are to consider peace as a good thing, but a newly-acquired peace, while the war expenditure has not yet ceased, can scarcely fail to produce a depression—I hope only a temporary one—but it appears somewhat preposterous that plenty should be productive of evil. I was quite vexed I was not at home the last time you called here, that I might have given you your choice of the specimens of the poet's hand-writing in my possession. The one I have sent is not a good specimen of his writing, being hurriedly written with bad ink; but upon the whole I considered it the most respectable I had to send you, being a poem composed on the banks of the Nith, the persons and scenery familiar to you.

My wife joins me in kindest compliments to Mrs Grierson and you. Tell Mrs G. it would give me great pleasure to see her at her ain fire en', and I am not without hopes of having that pleasure, but every year I live

increases my reluctance to undertake a long journey, and every year increases the difficulty of my leaving home; but when the mausoleum is completed I shall certainly, if then in health, endeavour to make a visit to Dumfries.—With best wishes for your family happiness and prosperity, I am, my dear sir, your most obedt. humble servant,

(Signed) GILBERT BURNS.

William Grierson, Esq.,
Merchant, Dumfries.

There was an interesting statement in the late Doctor's writing relating to an incident which occurred at Penpont to Burns while prosecuting his duties as officer of Excise. It was taken from the statement of Mrs Wallace, widow of the late Alexander Wallace, weaver, Thornhill, who was born in 1788, and was at the time 75 years of age, thus showing that it was written in 1863. She stated that her father, James Hastings, was a servant to the Rev. Mr Keyden, of Penpont, and when in his service had occasion early one morning to take his horses to the blacksmith's shop at Townhead. When passing through Peupont he observed a scuffle among some men in front of the public-house kept by Mrs M'Math. One of them was lying upon the ground calling for assistance, but Hastings supposing that the man was drunk gave no attention to the request. As he passed towards Townhead he observed some horses on the Corsegate or Corseroad laden with barrels, and he afterwards learned that the affray he had witnessed was between a party of smugglers and Burns, the officer of Excise, and that the officer was the person who had been knocked down and was calling for assistance. Hastings was afterwards summoned to answer before the Justice of Peace Court in Thornhill for refusing to give aid to Burns when called upon. Burns prosecuted, and Hastings having pled the mistake he had made in thinking it was a drunken brawl was acquitted. The public-house referred to was the house recently taken down and rebuilt by Mr Douglas at the east end of the Corseroad, Penpont, and in the present building there is inserted the date stone of the old house bearing the following initials and date:—"T.M., I.M., 1733." These are the initials of Thomas M'Math and his wife, who at that date built the old public-house. Mrs Wallace also states that when Gilbert Burns removed from Dinning Farm, parish of Closeburn, Mr Bacon, of Brownhill Inn, bought the bed in which Burns was born, that it was placed in the stable at the inn, and that James Hastings, her father, slept

in it when a servant there. She describes it as a “wee, black, oak bed, so low in the top that you could scarcely stand on your knees in it,” and adds that her father got many a shilling for showing his bed to travellers who came to the inn. She also states that Gilbert Burns when at Dinning was the first farmer in Nithsdale who had a dairy of Ayrshire cows. She tells the following story:—One evening when Burns and Bacon were sitting in a room of the inn a man from Leadhills entered. In a little Burns rose and went out, and the man inquired who he was, Bacon answered that he was the poet, and the man remarked that he was but a clown, which doubtless Burns overheard. Thereupon Bacon bet a bottle of wine with him that Burns would make a poem on him when he came in. Accordingly on Burns’ return he was asked to make a poem. Burns asked his name, and was answered Andrew Horner, and also when he was born, and was told 1739. Then said Burns:—

In the year seventeen hundred and thirty-nine,
The deil got stuff to make a swine,
And threw it into a corner,
And called it Andrew Horner.

Mr Wilson discovered several other letters bearing upon the erection of the mausoleum. The first is from Robert Ainslie, W.S., who accompanied Burns on his Border tour, and to whom he addressed many of his best epistles. It runs:—

William Grierson, Esq.

Sir,—The letter addressed by you and Mr Henry Duncan to me, dated 16th December, having been sent to Edingham, where I have not been since the middle of November, and the roads having been blocked up by the snow, these two circumstances have combined to prevent me from receiving it until within these two days. I am much gratified by the gentlemen at your very respectable meeting relative to the mausoleum to the memory of Burns having thought of me as a member of their Committee, and I willingly accept of their nomination. I am only afraid that being so much resident in Edinburgh, where I am following my profession of a Writer to the Signet, I may be but an inefficient member. When I am in the county, however, you and your friends may rely on my always attending every meeting which takes place during that time.—I am, sir, your most obedient servant,

ROBERT AINSLIE.

Hill’s Street, Edinburgh,

3d Feb., 1814.

There were two letters to the Secretary, Mr Grierson, from K. W. Burnett, Edinburgh, who, along with Sir Walter Scott, took

an active interest in securing subscriptions towards the erection of the mausoleum. He was probably connected with Lord Monboddo, father of Miss Burnett, to whom Burns in his "Address to Edinburgh" pays one of his most inspired compliments—

Fair Burnet strikes the adoring eye,
Heav'ns beauties on my fancy shine ;
I see the sire of love on high,
And own his work indeed divine.

They were in the following terms :—

Edinburgh, 12th Feb., 1814.

Sir,—I had some time ago a letter from you and your brother secretary for the committee of gentlemen who are raising a fund for erecting a monument to my much-admired friend, Mr Burns, and take this opportunity of expressing my most earnest wishes for the success of a measure which will do that country which produced one of its greatest ornaments in poetry very great honour. The subscription paper I have given to Mr Goldie, bookseller, Princes Street, to hang up in his shop, but as Kincardineshire was the county of Mr Burns' father's birth, and still contains a number of his relations, I submit to you the propriety of sending me a few additional copies of the proposals that I may distribute them in that county and Aberdeenshire.—With my hearty wishes for success, I am, sir, your most obedient servant,

K. W. BURNETT.

My D. daughter, whom you took charge of to Dumfries, is in good health, and very sensible of your polite attention to her.

Edinburgh, 26th Dec., 1814.

Dear Sir,—As soon as I received your letter I had some communication with Mr Scott, and have ever since been making great progress in collecting the subscription money for poor Burns' monument, most of which I have now received; but until our Court meet again I cannot complete them, as I shall to-morrow set out for St. Andrews for about a fortnight or more. In a few days after my return to town I shall send you the whole, with a statement of their amount. Here I cannot boast of much success, having only procured a guinea from Mr Jeffrey, the celebrated lawyer, and put down myself for two. The play produced only £39 14s neat, but there was short warning, and on Tuesdays the house is generally thin. I believe when all shall be collected I shall have to transmit to you £60 14s or thereby. My endeavours in the north country totally failed. Indeed, I could not discover in the How of the Mearns where Mr Burns' father had been born, and must have had many relations, a single person who counted kin with him, the last that could be recollected having removed about a score of years ago to Aberdeenshire. He was a farmer of the name of Burness, and, I have heard, the poet's cousin. I blush for the indifference of Scotland to a genius that did her so much honour, and hope that your success in England will make some amends, however painful the reflection that Burns' native country pays so little respect to his memory.

Wishing you many returns of the season, I am always, dear sir, yours most faithfully,

K. W. BURNETT.

Another letter was from William Douglas, M.P., one of the members of the Mausoleum Committee, the spirit of which did him considerable credit, as persons in official positions were generally imposed upon when subscriptions were required for any object under the sun. He thought right to show the honest feeling it breathed.

Castle, January 21st, 1814.

Sir,—I enclose the covers frank'd as you desired. I know of no person in Aberdeen fitter than Mr Thomson for receiving the subscriptions.

The subscription paper and resolutions which you sent me have been committed to the care of Mr Alex. M'Millan, in Castle-Douglas, who will lose no opportunity of obtaining any little matter which the people of the place and neighbourhood may feel disposed to contribute. It is quite right to try every person and every place, but I do not expect much here, as the neighbourhood, especially the wealthier part of it, will most probably forward their subscriptions to Dumfries. I have some difficulty about my own. I am not less averse to ostentatious forwardness than I am to parsimony. I neither wish to fall short of the liberality that is proper nor to presume beyond it, and would much rather, as one of the committee, give somewhat additional afterwards, if necessary, for completing the design, than be emblazoned on the page of a public subscription paper. If you think ten guineas right, let that be my subscription in the meantime. If too much or too little omit me till I see you in a few days hence as I pass to London, where I can be made acquainted with the subscriptions of persons similarly situated and conform to their example.

By-the-way, a little more of the profits of poesy might have been dedicated by the most fortunate of our Border minstrels to decorate the memory of a less fortunate bard.

However, it is not by the liberality of a few individuals, but by the amount of the general subscriptions, that the committee's object is to be attained.—I remain, sir, your very obedt.,

WILLM. DOUGLAS.

Mr Wm. Grierson, Dumfries.

Mr Wilson also found the following letter in connection with the Burns Club from William Tennant, author of "Anster Fair," then teacher of classical and oriental languages in Dollar Academy, and afterwards Professor of Oriental Languages in St. Mary's College, St. Andrews:—

Dollar Academy, Feb. 2nd, 1822.

Sir,—I received duly your esteemed favour of 25th notifying to me my admission as honorary member of the Dumfries Burns Club, an honour for which be pleased to accept of my warmest and most respectful gratitude. May much joy and convivial blessedness attend your sittings.

Should Mr M'Diarmid be within your reach, I shall be obliged to you

by your bestowing upon him my best regards. I should be very happy to be near such chosen spirits as your club consists of, and to replenish my little glass from the plenitude of Burns' china punch bowl; and with best wishes to you, sir, your president, and all your other members, I am, with much respect, your very faithful servant,

WM. TENNANT.

Mr Wilson read a number of very interesting letters from John Mayne, which he had discovered in looking through the papers of the late Dr Grierson, Thornhill. Mr Wm. Grierson, the late Dr Grierson's father, appeared to have carried on an extensive correspondence with natives of Dumfries resident in other parts of the country. He long acted as factor upon a property in Dumfries which belonged to the mother of John Mayne, author of the "Siller Gun" and other poems, and in many of Mayne's letters to him there are passages which might be of interest even at this distant date. The first is highly interesting to this locality.

London, 13th January, 1809.

William Grierson, Esq., Jun., Dumfries.

Dear Sir,—I received safely your kind present of a New Year's Day bun, a present which calls to mind many pleasing recollections, and is a new proof of the kindness which influences all your conduct when writing to or thinking of me; and I sincerely thank you for your unceasing partiality; wishing you and all your near and dear friends many happy returns of every festive period.

I hope you have begun to supply poor Jock Wilson with a weekly allowance of snuff. Any other innocent luxury that you think necessary to his happiness I will cheerfully pay for. I wish you could learn from him his idea of "Whistle o'er the lave o't" being the composition of John Bruce. You know Burns has ascribed it to him, but I believe it is of much higher antiquity, and that it is one of the many fine old airs that, having been chanted in the Cathedral service when Episcopacy prevailed in Scotland, were vulgarised and degraded by indecent words at the Reformation. Any other information connected with minstrels or minstrelsy, especially as relating to the Siller Gun, will be a most acceptable service to me, and opportunities like the present for obtaining it will not frequently occur. You will readily perceive that on making this inquiry I do not mean to detract from the merit of John Bruce, whose memory I respect. My wish is to ascertain correctly if the air in question is his composition; if not, whether or no he was even distinguished as a composer of any other music.

Now, my dear sir, with respect to your queries about a new paper. It is impossible for me so long estranged from Dumfries to ascertain the probable success of such an experiment. The expense, I am confident, would exceed anything of which you have an idea. The responsibility is at all times irksome, and the labour and anxiety unremitting. Were I to advise you it would be to have nothing to do with it, unless you have very

great confidence in the parties who are to edit and print for you. In all the instances of papers begun in this country by a number of proprietors, I have generally noticed that the property ultimately verged towards decay until the majority of the proprietors, worried and teased for money to carry it on, forfeited their shares, and thus condensed it in the hands of their active partners. This was actually the case with the *Star*. It was undertaken at first by not less than 24 persons. Ten of these forfeited, and the remainder agreed to sell. A gentleman and myself bought it, and if the whole property had not been thus vested in few hands it would have ceased to exist many years ago. Besides, the business of printing a newspaper is one of those in which a sleeping partner can never see his way. I should regret, moreover, your embarking in any scheme in which I might be expected to be of service when, from a principle of delicacy, I cannot render you the assistance I could wish. Mr — (the name is torn out; he began life as an apprentice in the office of the *Dumfries Journal*) is my old master, and I never will violate the respect which I have for his family. This sentiment, however, has not led to the opinion given in the preceding part of this paragraph. You have a right to print or publish as you please, but I really believe that Dumfries is not the market for two newspapers. This being my honest opinion, I know you will not be displeased with my candour, assured that I am with every wish for your welfare,—My dear sir, your much obliged,

J. MAYNE.

Mayne also sent the following poetic letter acknowledging the bun referred to. It is a very clever production, and is not, so far as Mr Wilson knows, contained in his published works :—

London, 4th January, 1809.

In the daft days o' mirth and fun,
The author o' the Siller Gun
To Grierson, friendship's faithfu' son,
This Handsel Monday,
Returns thanks for New'r-day bun
Received on Sunday.

The better day, the better meed,
Handsel'd by you, I'm sure to speed;
Wow, man! but it be dainty bread,
And brings to mind
Pleasures lang past, and friends now dead,
Or left behind.

When I've been skelping through the rain,
Or hunting after news in vain,
I'll think on Nith's sweet banks again,
And taste your bun,
For pleasure, when it follows pain,
Warms like the sun.

Warm as the sun and frank and free,
 I've marked a constancy in thee—
 The type o' what true friends should be ;
 For without vaunting,
 Wealth never yet had charms for me
 Where worth was wanting.

To Wightman, priest o' Kirkmahoe,
 The gentlest creature here below ;
 In short, to a' the friends I know
 Remember me,
 And ne'er may care, that bogle-boe,
 Haunt them or thee.

And for their sakes, whom ye revere,
 And hers, the dearest o' the dear,
 This breast shall glow in love sincere
 By wishing to them
 The comforts of a gude New-Year,
 And mony o' them.

J. MAYNE.

To William Grierson, Esq., of Baitford, Dumfries.

Then followed a letter of date 3rd March, 1809, dealing with the air of "Whistle o'er the lave o't," and a number of Dumfries matters.

London, 3rd March, 1809.

Dear Sir,—Your letter by Dr Brewster came safe, and I thank you very kindly for making me acquainted with that gentleman. I am much obliged to you also for your letter of the 7th ult. in reply to all my queries and wishes. I am glad that you have enabled me through the medium of Johnny Wilson to adhere to my first statement that John Bruce, however famous as a player, was not the composer of the air of "Whistle o'er the lave o't." I always thought that it was of much higher antiquity. Continue your kindness to Mr Wilson, and I will repay you with pleasure. I wish it were possible to get a sketch of John Gass and of William M'Clush, and any other of the worthies that are still living connected with or mentioned in "The Siller Gun." If you can help me to these and to drawings of the Craigs, or of the town, as far as they can illustrate or embellish a future edition of that poem, I will cheerfully and handsomely pay for them. A view of the procession would also be very gratifying. In anything I have done or mean to do on this subject, emolument never entered into my consideration. The town of Dumfries and everything connected with its vicinity are so dear to my heart that it would afford me even a dying pleasure to have been instrumental in diffusing or prolonging a knowledge of their beauties. Entreat Mr Anderson in my name to read the poem over again, and as he reads to write down every anecdote and observation on men and things that occurs to him. I was very hurried when the notes were thrown together. What was worse, I was

irritable, nervous, and bilious. If you and any other dear friend will help me to materials I will attack them piecemeal, and endeavour to render a second edition, if ever we arrive at it, more worthy of the public favour. I am proud that any lady, a friend of yours, does me the honour of singing a composition of mine. I have therefore enclosed a correct copy of "Bonaparte o'er the sea," which you can transcribe for her amusement.

* * * * *

I wish it were in my power to assist you in the goodly work of charity which so laudably engrosses your attention. A good deal of money in old guineas might be picked up here annually for the purpose of improving and extending the comforts of the town's hospital in Dumfries. I do not know any person in London so likely to promote this great end as Mr Kay—he is so well known, and so generally esteemed. I wish you would write to him once more before you go to press with your annual report. I am not only too obscure, but too much occupied with business to be of service to you or him on this occasion. By all means, however, write to the Duke of Queensberry by post. His Grace is benevolence itself, and will, I am sure, be delighted with a new opportunity of smoothing his path to eternity, now fast closing upon him. I claim to myself some merit in having suggested to Mr Laurie of Ironespie the London subscription for the family of Burns, to which I was the first subscriber of five guineas. Mr Laurie was indefatigable for a while, and collected upwards of 200 guineas, which was ultimately vested in the hands, I believe, of Alderman Shaw. I do not know how it comes, but I have a kind of presentiment that this spring will see you in London. Is there any hope of such a pleasure? Commend me to all friends, and believe me truly, my dear sir, your much obliged,

J. MAYNE.

William Grierson, Esq., Junr., Dumfries.

In a friendly letter Mayne congratulated Mr Grierson upon his marriage with Miss Sibbald in a very neat manner:—

London, 14th September, 1815.

I lose no time, my dear sir, in replying to your letter of the 7th from Haddington, received this morning, announcing to me the consummation of all your wishes in your marriage with Miss Sibbald—an event on which I beg leave to congratulate you with my whole heart, entreating my most respectful compliments to your amiable lady, with every wish that you may be—

Blest with all that Heaven can send—

Long life, long health, long pleasure, and a friend.

I have sent the *Star*, as you desired, to Dr Sibbald, and shall always be proud to manifest the respect with which I am, my dear sir, yours truly,

J. MAYNE.

Many editions of the "Siller Gun" were published, and in a letter of date 25th June, 1816, the following occurred:—

London, 25th June, 1816.

Dear Sir,—I am glad that you were so well pleased with the manner in which everything connected with the dinner at the Freemasons' Tavern

was conducted. Mr Jerdan made great exertions, and they were most deservedly successful. Enclosed are copies of a few lines of mine in commemoration of Burns, but neither written for nor recited on the above occasion, and have no other merit than their simplicity and truth. I was sorry to observe what you said about the meeting of the Seven Trades in their hall on the King's birthday, that so few of the heroes of 1777 were present.

E'en he whose soul now melts in mournful lays,
Shall shortly want the generous tear he pays.

But you may depend on it that neither Deacon Threshie nor Willie Berry shall be forgotten in the next edition, if ever there is another edition of the "Siller Gun" in my lifetime.

Cracking his jokes, and unco kerry,
Here's Deacon Threshie, wise and merry ;
And yonder's blameless Willy Berry
The ladies' glover,
At five and fifty bright as sherry,
And still a lover.

This is something like the manner in which these gentlemen will be mentioned and introduced in the poem, but as I am not certain that these will be the precise words, I shall be obliged by your saying very little to anybody about them. Any notice in the text will afford an opportunity of saying something handsome if you will furnish me with it in the Notes.

—I ever am, my dear sir, yours truly,

J. MAYNE.

William Grierson, Esq., Dumfries.

The verse contained in this letter was identical with that of verse 13, canto 3d, of the edition of the "Siller Gun," &c., published in 1836.

There were other letters by Mayne, but they referred to matters strictly private or to subjects unimportant at the present day. After his death, Mr Grierson appeared to have been the moving spirit in placing a tablet to his memory in the vestibule of St. Michael's Church, Dumfries. His son wrote to him giving some information for the tablet :—

My Dear Sir,—I now reply more fully to your last communication on the subject of the tablet proposed to be placed in the vestibule of St. Michael's Church, Dumfries. I gather from what you say that your arrangements are now nearly complete, which being the case, I need not further advert to some regret which I feel at not having earlier been made acquainted with the design. You will readily believe that my sister and I are deeply sensible of the value of a testimonial of esteem for the memory of a parent, so dear to us, proceeding from his native townsmen, who in recording their appreciation of his merits will do honour to their own sentiments as well as to his good fame. Collectively and individually,

they have our best acknowledgments. I have no doubt you will communicate to me further particulars on this interesting subject.

My father was born in Dumfries on the 26th of March, 1759, and after a life devoted to literary pursuits in this metropolis, and distinguished by every virtue which can adorn a public life or hallow domestic retirement, died on the 14th March, 1836, at his residence in Lisson Grove South, Marylebone. His remains are deposited in the Churchyard of St. Mary's, Paddington.

Most fully estimating your friendship and exertions on this occasion.—I remain, my dear sir, yours very truly,

W. H. MAYNE.

London, Friday, 10th March, 1843.

In the correspondence which arose out of this proposal Dr Robert Carruthers, of Inverness, a native of Dumfriesshire, wrote the following spirited letter :—

Inverness, Jan. 24, 1843.

My Dear Sir,—I am glad to see that you are still as active as ever in promoting any laudable or patriotic object connected with our native district. The proposed tablet to the memory of Mr Mayne is a just and proper mark of distinction from his fellow-townsmen, and I am much obliged to you for affording me an opportunity of subscribing towards it. I remember our late excellent friend with strong affection and regard. He was peculiarly kind and attentive to me when I was young and unfriended, and had no claim on his hospitality beyond that of being a native of Dumfries. In later years we had few opportunities of meeting, but I never went to London without seeing him, and we kept up a friendly acquaintance till the time of his death. You knew him much better, and can testify to the warmth of his heart and the strength of his local attachments. Apart, however, from all personal considerations, the merits of Mr Mayne as a Scottish poet entitle him to this posthumous honour from his fellow-townsmen. His muse was a true native of the banks of Nith, and in depicting local scenes and customs he had a certain homely penetrative humour and liveliness of illustration, joined to genuine Scottish simplicity, that are perfectly irresistible with natives of Dumfries and its neighbourhood. I have seen a verse of the "Siller Gun," and even an illusion to the poem, operate as a spell among our townsmen.

Do you mean to confine the subscription to natives of Dumfries? You would recollect Mrs Allan Cunningham, or her son Peter; the latter is a gentleman of literary taste and acquirements. If poor Allan himself had been alive he would have gone cordially into our scheme. I remember Mr Edward Hyslop, of the *Londonderry Journal*, used to be much with our friend about the year 1818 or 1819. There is a very worthy and accomplished native of the County of Dumfries (Mouswald or Dalton, I think) who must have known Mayne. I mean Dr William Beattie, author of various works, as "Scotland Illustrated," "Switzerland Illustrated," &c. If you think of applying to him, his address is No. 6 Park Square, Regent's Park. I have no doubt, however, but your own zeal and intimate

acquaintance with Mr Mayne's friends will procure adequate funds for the proposed object.—With much respect and many kind remembrances, I am, my dear sir, yours faithfully,
 To Wm. Grieve son, Esq., Noblehill Cottage.

ROBT. CARRUTHERS.

III. *Folk Lore of Glencairn (continued).* By

MR JOHN CORRIE.

When we remember that so lately as the year 1709 a woman was tried and condemned as a witch in our own good town of Dumfries, while only some fifty years earlier no fewer than nine suffered death by burning on the same indictment, it need occasion no surprise that some still living are unable wholly to disabuse their minds of a certain measure of credence in the existence of witches, warlocks, and others of that ilk, who are supposed to possess the power of interference in our human affairs. The Glencairn Church Session Records contain several references to cases of reputed witchcraft. One of these occurs under date "Apryl nynth," 1694. Another, noticed by Mr Monteith in his little "History of Glencairn," on November 14th, 1707. It is only when we come into contact with the oral traditions of the people, however, that we realise the extent to which a belief in witchcraft must have prevailed. Whole families were credited with a knowledge of the art, and as the faculty was supposed to be transmitted unimpaired from father to son, and from mother to daughter, the credulous were never at a loss for subjects upon which to exercise the superstitious fancy. Among local proficientes an old man named Tammas K——— seems to have enjoyed special notoriety. It is said he could get almost anything he wanted, for to refuse him a favour was to court instant and condign punishment. He would knot a wisp of straw, throw it down beside a cow, and next day the cow would either be dead or dying. One day the warlock, as he was generally called, applied to a villager who grew a remarkably fine strain of potato onions for a bulb or two as seed. The man managed to put him off, however, and was rather proud of the achievement, until he discovered a few days afterwards that his entire stock of onions had mysteriously rotted away. On another occasion a villager, in ill odour with the warlock, was engaged leading "rice" (tree loppings) past the line of houses where the warlock lived. As he neared the place, he noticed some of the neighbours laughing and

looking in his direction. Turning to ascertain the occasion of their mirth, he was amazed to find that he had nothing but his horse's halter in his hand, both horse and cart having been left standing on the roadway about a quarter of a mile distant. This devilry was clearly due to the malign influence of the warlock, for he was observed engaging in some mystic incantations as the carter approached the door of his dwelling. We may supplement these experiences with a reminiscence of present day witchcraft. The narrative is given, as far as possible, in the words of our informant:—"Auld Jean D——, whose mother and grandmother afore her were baith witches, cam' in ae morning afore a Moniaive fair day tae ask me tae help an' stack hay at Craigdarroch in her place, as she wanted tae gang tae the oo-rowin' at Glencrosh. My mither said 'Het! she's far ower young;' and I said 'I'm doost no gaun,' for, ye see, I had made up my min' tae gang tae the fair. Jean gaed oot o' the door gie ill-pleased like, and my mither said 'She's an ill body, and ye should maybe hae gaen;' but I doost gaed a lauch, an' thocht nae mair about it. Well, next morning, believe me or no as ye like, I couldna lift my heid, an' I had gaen tae my bed as weel as I ever felt in my life. My mither said 'Oo, lassie, I think she has bewitched ye;' an' tae tell the truth, I thocht sae mysel', for I never felt the same aither afore or since. I was doost ill wi' a queerness, but for the life o' me couldna tell what was wrang. Next day I was a' richt again, but by that time, of coorse, I had missed the fair." Happily, if the evil was a widespread one preventive or remedial measures were within the reach of all. Thus, a horse-shoe nailed over the threshold was supposed to afford perfect immunity, neither witch nor warlock being able to enter a dwelling where this mode of protection had been adopted. By some a branch of rowan tree was looked upon with equal favour, and bundles of small rowan tree twigs were constantly kept suspended over the doorway, or attached to the top of the box-bed or corner cupboard. Salt was likewise considered efficacious, and when churning had to be done it was customary to put a handful of salt into the churn together with the cream. In the event of the churn getting bewitched through neglect of this precautionary measure, it was necessary to remove both the churn and its contents across running water, for it was only in that way the baneful spell could be neutralised, and butter induced to reward the

labours of the churners. Spitting, again, would seem to have been regarded with favour as a means of averting witchcraft, and the practice of spitting in the hand is still followed by rustics, both when they bargain and when they vow eternal friendship, an interesting example of custom surviving long after its original significance has been forgotten. Coming to speak of elves or fairies, we realise that we have to deal with a class of beings very different from the witches and the warlocks. The latter, as the accredited emissaries of Satan, were looked upon with mingled feelings of hatred and fear. The fairies, on the other hand, would almost seem to have enjoyed positive favour. They were admittedly capricious and resentful, however, and as their wrath once aroused was terrible to behold, it became the constant study of the gudewife of the house to propitiate them by every means in her power. Thus, some simple refreshment, such as bread and cheese, was frequently laid out for them in places they were supposed to frequent, and it was an article in the popular creed that those who thus befriended them were liberally rewarded in some way or other for their kindness. We append a narrative communicated by a Moniaive lady, in which gratitude for a favour and resentment at an insult are curiously blended:—Two men were ploughing down in Closeburn parish, when they both felt a strong smell of burning cake; one of them said in an off-hand kind o' way, "Yere cake's burnin'." "Make us a spurtle tae turn it wi', then," said a voice apparently close at hand. The man good naturedly did as directed, and laid the article down on the ground. On returning to the spot he found the spurtle taken away, and bread and cheese left in its place. He partook of both, and likewise gave some to his horses, but his companion would neither taste himself nor allow his horses to taste. An affront of this kind could not be overlooked, and he had not gone many steps until he dropped down dead in the furrow. All-Hallow's Eve was universally recognised as the fairies festival, and on moonlight nights bands of the "little folk" were to be seen dancing in circles on the sward, and the merry tinkle-tinkle of fairy bridles heard as the little equestrians journeyed on their gaily caparisoned steeds to the place of rendezvous. Local recognition seems to have been given to at least four kinds of apparitions, viz., the water kelpy, the goblin, the wraith, and the ghost. In Glencairn we find people who still avow not only that these

beings exist, but that they have both seen and spoken to them. We let illustrative examples take the place of description :—Mrs G—— on going out one afternoon to call upon a neighbour, who resided about half a mile distant across the moor, saw her friend evidently coming on the same errand. She therefore retraced her steps, and entering the house, awaited her friend's arrival. Her expected visitor not making her appearance, Mrs G—— went to the door to see what had detained her, but although she gazed in every direction there was no one to be seen. As the afternoon was now far advanced, she decided it would be better to defer her visit until the following day. Walking across on the morrow, she remarked, in the course of conversation, “I saw you on the way to see me yesterday; what made you turn half-road?” “Me coming to see you!” exclaimed her friend. “I can assure you I wasna that, for I was scarce frae my ain fireside the hale day.” Both were positive, however, and it was agreed for the time being to avoid all further reference to the matter. A week later Mrs G——'s neighbour died, and her corpse was carried to the churchyard over the very track upon which her wraith had been seen by Mrs G—— on the afternoon of her intended call. My grandfather, while returning one night between eleven and twelve o'clock from a visit he had been paying his son, was startled to see a figure in white come out of the Gap's Mill loaning, and mount the dyke by the roadside. Noiselessly gliding along the top of the fence, it continued to keep pace with him until the Pentoot well was reached, when it mysteriously disappeared. My grandfather was not superstitious, yet this particular encounter he never could altogether explain away. It may be mentioned that the Gap's Mill and Pentoot pens referred to in the narrative were both of evil reputation as having been the scenes of child murder, and I can remember how as a boy “each particular hair stood o' end” as occasion took me near the haunted spots. There is often a ludicrous side to these ghost stories. Take the following example :—A successful pedlar named Mungo Clerk having departed this life, his neighbours agreed that as he appeared to have no near relatives the best thing to do with his money was “to ware 't on himsel'.” Mungo accordingly had “a gran' funeral,” that is to say, “plenty tae eat and mair tae drink,” and so freely was the whisky partaken of that by the time the rite of burial had been performed all were

suffering more or less from the effects of their potations, while one had lost the use of his legs altogether. Someone suggested that the incapable should be sent home in the hearse, and without more ado he was slipped inside. When about half way home the driver, who by drunken inadvertence had been told nothing about his passenger, was startled by first a groan and then a yell. Mungo's ghost sure enough, thought the driver, and leaving horse and hearse to their fate he took to his heels, and never stopped until he reached his native clachan. Our Glencairn ghosts appear to have had some special liking for pens and bridges, for Marwhirn, Auchentrown, Auchencheyne, Blackstone, and Kirkland bridges have all at one time or another harboured their respective spectres. Several of these have now been "laid," however, by the cudgel of the wayfarer, and the others have quietly disappeared before the onward march of mind. With our forefathers prayers, spells, and exorcisms seem to have been the accepted weapons of defence against hostile spirits, and recourse was usually had to these when their obstinacy rendered interference necessary. The ordeal was always a trying one, however, and called for the utmost circumspection on the part of the exorcised, rash interference having not infrequently resulted in the would-be "layer" of the ghost finding himself ignominiously "laid." In the ceremony of ghost-laying the Bible seems to have been considered an indispensable adjunct. Birds somehow occupy a much more important place in popular superstitions than quadrupeds, and it is curious to find that most of our bird visitors are subjects of superstitious favour. Thus it is a popular belief with us that the direction from which the cuckoo's note is first heard is that in which the hearer will go on an important and successful journey before the year is out, while it is looked upon as an omen of good luck when a swallow comes to build its nest beneath the cottage eaves. We have a curious notion in Glencairn that the barley awn chokes the cuckoo, and hence it is that the cuckoo's note is never heard after the barley becomes shot. Superstition has not wholly despised our resident birds, however, and there are few, we are disposed to think, who will regret that her protecting mantle has been thrown around the friendly robin. It is commonly believed with us that when a robin comes fluttering to the window earlier in the autumn than usual it is a sign that the approaching winter will be an excep-

tionally severe one. The belief has probably nothing but its beauty to commend it, but we almost think it deserves to live were it for that alone. The birds generally have come to look upon man as a foe, and it should be pleasing to find that one at least continues to trust in him as a friend. According to the old jingle—

The robin and the wren
 Are God Almighty's cock and hen ;
 If ye take out o' their nest
 Ye'll never thrive again.

Would that a similar notion of ill-luck attended the persecution of all our birds. The yellow-hammer, less fortunate than the robin, is the subject of universal reproach, and for no other reason that we know of than that it chanches to wear the devil's livery of yellow. The song of the yellow hammer is monotonous in the extreme, and in Glencairn the notes of which it is composed have been interpreted into the request "please will ye gie me a wee bit bread and cheese?" the *e* in the final syllable being drawn out to correspond with the last note of the song. Among quadrupeds the cat has long been looked upon with suspicion, a circumstance due no doubt to the belief that this was one of the forms in which witches were wont to masquerade. Great importance seems to have been attached to the position in which the first lamb or the first foal was seen, for should either of these animals be discovered "lying," then a year of sickness was signified, but if seen in motion then health and activity were supposed to be assured throughout the year. That humble little animal the house-cricket, or "charker," as it is locally called, has been extremely fortunate in the superstitions which attach to it, and there are few people who would knowingly kill a "charker," as its companions would be sure to eat holes in their clothes. "Charkers" are likewise supposed to bring luck to a house, and I am credibly informed that they are occasionally captured and conveyed to the home in the hope that luck will be conveyed there with them. The snail, again, is esteemed an invaluable remedy for warts. Here is the recipe:—Procure a black snail and kill it, rub the wart or warts with it once a day for a week, and carefully preserve the snail after each application. By the end of the prescribed period the wart will become dry and crumble away. When bees swarm they are "rung down"

with a frying pan or whatever other tinkling instrument may be most convenient, a custom which, as an old writer quaintly observes, "may be of good use to let the neighbours know you have a swarm in the air, but of very little purpose to the reclaiming of the bees." The hare, like the cat, is looked upon with suspicion, and when a hare crosses the path of a wayfarer it is an omen of impending misfortune. Toads, again, are considered "pushionable beasts;" while the Common Lizard or "Ask" is supposed to be addicted to jumping down people's throats. As a crowning absurdity, we have the belief that when horse hairs are put into water they turn into eels.

New-Year's Day in Scotland, although fast being superseded by Christmas as a festival, has long possessed its distinctive rites and ceremonies. In Glencairn our boys and girls still go through the village on New-Year's Eve chanting the song—

Hog-nog-nay, troll-lol-lay,
 Gie's a piece of pancake,
 An' I'll rin away ;
 I'll naither come to your door
 To beg or to borrow,
 But I'll come to your door
 To sing away sorrow.

Among their elders the practice of first-footing is engaged in with equal spirit, and not always, we fear, with equal judgment, for while the intention may be friendly, the consequences are often such as all true friends must deplore. In the earlier years of the century children were not unfrequently allowed to join in these midnight revels, and we can easily imagine the demoralising effect of the excesses to which they must often have been eye-witnesses. In better regulated households the observance took a less vicious form, each child being presented with a "piece" and a penny "for luck" before leaving bed on New-Year's morning. Another peculiar custom associated with the anniversary of the year was the rivalry among village maidens to get the "ream" or "flower of the well," the maiden who reached the well first being supposed to get the best husband.

Twall struck. Twa neebour hizzies raise,
 An' liltin', gaed a sad gate ;
 "The *flower o' the well*" to our house gaes,
 An' I'll the bonniest lad get.

No ashes or sweepings were allowed to be taken out on New-Year's Day, for there was a danger of taking out the luck for the year with them. To meet an ill body on the morning of this particular day was looked upon as unfortunate, but to meet a "gude body" was "muckle worth." Flat-footed people, again, were supposed to possess a peculiarly baneful presence at this season, and all such were carefully avoided. Another curious belief was that work commenced in the old year should upon no account be left unfinished till the new, else its resumption would be attended by disastrous consequences.

Leaving the New-Year and its associations, we have now to glance somewhat hurriedly at a variety of beliefs which could not be conveniently referred to elsewhere. Some of these may be considered puerile in character, but they at least serve to show how the ordinary everyday occurrences of life may be transformed and magnified by the superstitious imagination until they become signs and omens of weighty import. Stones are occasionally found fashioned by skill or accident into some unusual shape. These the credulous invest with superstitious importance; and I have in my possession a stone, with the impress of five fingers on its surface, which the devil is said to have hurled in anger at some one who had outwitted him. Pins, although insignificant to look at, have long occupied an important place in folk-lore. Thus we have the rhyme—

See a pin and pick it up,
All the day you'll have good luck.

In Glencairn we have a saying— "Every tenth step find either a horse hair or a pin"—which may also be intended to convey the idea of luck. Black pins, however, are most unfortunate, and woe awaits the bride in whose dress a black pin finds a place. Among the numerous superstitions connected with clothing perhaps the most prevalent is that the clothes of the dead never wear long. It is another wide-spread belief that should a new dress be either burned or torn the first time it is put on some misfortune is sure to befall the wearer before the dress is worn out. When the new moon is seen, the apron is turned to ensure luck throughout the month. Money is sometimes similarly treated; and it is always considered lucky to have money in the pocket when the new moon makes its appearance. Most people are familiar with the notion that when the right ear tingles some

person is speaking well of one, but should the sensation be in the left ear then the opposite is the case. The itching of the foot, again, is supposed to indicate that the person experiencing it will shortly walk on strange ground; while an itching palm is appropriately associated with the coming of money. When anyone happens to sneeze he is asked, "Wha's kirn hae ye been at?" A hiccough is also looked upon as an evidence of theft, but not necessarily of the same specific character. The dock leaf is still popular as a cure for nettling, and children continue to interrogate the feathery seed heads of the dandelion as to the time of day, carefully regulating, no doubt, the force of the respective puffs so as to ensure an approximately correct answer. The luck of a sprig of four-leaved clover is, of course, proverbial; but it may not be so generally known that equal importance was at one time attached to the finding of a Saint John nut, or a nut with two kernels. There are a number of minor superstitions more or less intimately connected with the home, which we may here briefly summarise. A "flichen" on the grate or the tongs falling foretells the coming of visitors. The kettle "sobbing" on the fire is an intimation that some long-absent friend will shortly return. If the kettle is allowed to boil longer than is desirable it is said "to boil a' the lads away." A speck on the flame of a candle heralds the coming of a letter, and if the letter is already on the way the speck is expected to fall when the candlestick has been given a sharp rap on the table. Froth forming on the top of a cup of tea indicates riches, while the grounds at the bottom reveal the secrets of futurity.

6th March, 1891.

MR ROBERT MURRAY in the Chair.

New Member.—Dr Anstruther Davidson, of Los Angeles, California, formerly of Sanquhar, was elected an honorary member.

Donations.—The United States Geological Survey Report for 1887-8; the Transactions of the Canadian Institute, Toronto, October, 1890; Transactions of the Banffshire Field Club, 1887-8;

and 27 numbers of the journal and proceedings of the Linnean Society, presented by Mr W. D. Robinson-Douglas, Orchardton.

COMMUNICATIONS.

I. *Notes on the Flora of Dumfriesshire.* By Mr
ARTHUR BENNETT, F.L.S., Croydon.

Directly I read Mr J. T. Johnstone's paper on the "Flora of Moffat," I remembered some papers that appeared in the "Phytologist," and on referring to them, I found that some of the species accredited to Mr Sadler had been before reported, and by a very fair botanist—Mr W. Stevens—who resided in Dumfries. He was a correspondent of Mr H. C. Watson, and in his herbarium are several plants from the county, and on the old adage, "Honour to those to whom honour is due," I am sure Mr Johnstone would wish to see that given to Mr Stevens. Mr Stevens' paper appeared in the 3d vol. of the "Phytologist" (1848), p.p. 390-393 (the old series edited by G. Luxford). I will give the plants where it seems some addition to the knowledge of the county botany:—

Subularia Aquatica.—*Loch Skew*, intermixed with *Littorella lacustris*, which latter is by far more abundant. I suppose this would mean Loch Skene by a reference later on.

Geranium Sylvaticum.—A variety with the flowers much smaller, and of a rose colour, occurs in a plantation by the side of the Edinburgh road near Carronbridge; it is probably the same as that mentioned in "Bab. Man." (2d ed.), as found at Dollar by Dr Greville, and which the author supposes to be the var. *fastigiatum* of Fries.

Callitriche Pedunculata Psessilis.—Margin of Loch Skew at the end nearest to the White Coombe. (This would now be named *C. hamulata*.)

Peucedanum Ostruthium.—At the foot of Carronbridge.

Atriplex Deltoidea, Pab.—Corn fields about Thornhill and Drumlanrig.

Arum Maculatum, L.—Drumlanrig woods, sparingly.

Potamogeton Lanceolatus.—Stagnant pools at the foot of the Morton Hills; ditch near Auchenbainzie Loch. This, I have little doubt, would prove to be *P. nitens* Nolte, as it was named at the date of Mr Stevens' paper *lanceolatus*.

Carex Atrata.—Rocky cliffs on the top of a hill near Hartfell.

Carex rigida.—Summit of Hartfell, over a space of more than half-a-mile.

Carex irrigua.—In a boggy meadow at the foot of the Morton Hills, near the ruins of Morton Castle.

Ceterach Officinarum.—On walls about Drumlanrig.

Woodsia Ilvensis.—This rare and handsome little fern I found in considerable abundance on very steep, crumbling rocks amongst the hills dividing the Counties of Dumfries and Peebles in July last (1848); it is growing in dense tufts in the crevices of the rocks, and very luxuriant, many of the fronds measuring nearly six inches in length. At page 452 Mr Stevens connects "Loch Skew" to Loch Skene. In the first volume of the "Phytologist" (1844), Mr J. Cruickshank gives a list of fifty-one species of *Jungermannia*, with localities. In the same volume (p.p. 416-419) Mr Peter Gray gives a "List of the rarer flowering plants and ferns of the neighbourhood of Dumfries, with remarks on the physical conditions of the district." In vol. 3, pp. 254-258, Mr P. Gray also has a paper on "Plants occurring near Dumfries," but this is all on the Kirkcudbright side. The only reference to Dumfries is a dubious *Carex* found "in the wood beside Lincluden." On the 24th of January, 1860, Mr Thomas Brisbane, of Dumfries, read a paper, "Notes on the Autumnal Flora of Dumfries and the Stewartry of Kirkcudbright, communicated to the Fleming Society of Natural Science, New College, Edinburgh, by Robert Brown, F.R.P.S., Treasurer." On the 7th of February in the same year, Mr John Sadler, secretary, B.S.E., etc., read a paper entitled "Excursion to the neighbourhood of Moffat" before the same Society. He here speaks of finding *Pyrola secunda* at the "Beld Craig Linn." In the "Phytologist" for 1848, Mr P. Gray records finding a single specimen of *Pyrola rotundifolia* growing with or near to *P. media* "among heath towards Hill-head." This is Kirkcudbright, of course, but I do not think it has been recorded for that county. I have jotted down these notes, as I see it is proposed to commence a "Flora of Dumfries," and these references may be of use as where to look for records and information. I have consulted Mr M'Andrew's list to avoid giving needless repetitions. Mr Stevens' paper contains the indication of three species additional to the Dumfries, even as at present known—*i.e.*, *Subularia aquatica*, *Callitriche hamulata*,

and what is probably *Potamogeton nitens*, a species that years ago passed as the *P. lanceolatus* Smith in Britain. I have seen specimens so named that are unquestionably *nitens*. Search should be made for these this season; the first is very likely to occur, and additional counties are recorded for it nearly every year. Last year I received it from the Shetland Isles and the Outer Hebrides, and it has occurred in Kirkcudbright.

II. *Some of the Military Preparations in Dumfriesshire during the last war with France.*

By the Rev. ROBERT W. WEIR, M.A.

In February, 1793, the French Republic declared war against Great Britain. With the exception of an interval of about a twelvemonth after the peace of Amiens, and a shorter interval after Bonaparte's retreat to Elba, this war lasted till the Battle of Waterloo in 1815 caused the final overthrow of the great soldier who for so long disturbed the peace of Europe. During these 21 years our nation had to make great naval and military preparations not only for foreign, but for home service. The fear of invasion from France was never altogether absent, and there were times when the people lived in constant dread of the arrival of a French fleet, and the landing of a French army on some part of the coast. During this period the patriotic spirit of the nation was thoroughly roused, and there is evidence that every preparation was made to resist an invading army. My object in writing this paper is to describe the part which the people of Dumfriesshire played in making preparation for the defence of the County.

When war was declared the Government had to be prepared to resist not only invasion from abroad, but a spirit of rebellion and dissatisfaction caused by some who were imbued with the principles of the leaders of the French Revolution. Accordingly the earliest measures taken for military preparations were designed to resist both foes. In July, 1793, the ministers of Dumfries read in both parish churches this declaration, and intimated that all would have an opportunity of signing it:—
“We whose names are here subscribed do most solemnly declare that we are firmly attached to the present happy Constitution as established in King, Lords, and Commons; that we detest all

the principles which have been attempted to be disseminated by wicked and designing men tending to destroy all government and introduce anarchy and confusion; that we will assist Government in repelling all foreign invaders, and will assist the Civil Magistrate when called upon to do so for the purpose of repressing all riots or tumults that may arise in the County of Dumfries." The same declaration was doubtless read in the other parish churches of Dumfriesshire; but it would appear that at first it had not the desired effect. In the *Dumfries Weekly Journal* of 12th September, 1793, it is said that designing persons had spread a report that the proposed enrolment of Volunteers was a plan to kidnap men into the regular service without the payment of a bounty, and an appeal is made to the people to discard these unfounded rumours and show themselves willing as loyal citizens to aid the Government.

The first military force raised was the Dumfriesshire Fencible Cavalry. On the 23rd April, 1794, the proprietors of Dumfriesshire agreed to raise two troops of Fencible Cavalry, to be maintained partly by subscription and partly by Government. In the *Dumfries Weekly Journal* of various dates subsequent to that of the meeting there is this advertisement:—"Wanted, for the Dumfriesshire Fencible Cavalry, a hundred to a hundred and twenty horses. Those who are willing to contract for any number of these may apply to David Staig, provost, who will show a pattern horse. The horses are to be from 14½ hands to 15 hands 4 inches. From five years complete to seven years off—dark bays, browns, blacks, or chesnuts." In 1795 both troops were augmented to consist of 4 sergeants, 4 corporals, and 71 privates. Michael Stewart Maxwell, yr. of Springkell, commanded one troop, and was Major-Commandant. The other troop was commanded by Sir Robert Grierson. These troops were stationed for a time in Dumfries and afterwards in Yorkshire, and subsequently served in Ireland in suppressing the rebellion. They were reduced in 1800, when the Commanding Officer received a letter from the Lord-Lieutenant of Ireland expressing approbation of their services. The Commissioners of Supply, at a meeting held on 20th December, 1800, recorded their thanks to Colonel Maxwell, the officers, non-commissioned officers, and men of the Dumfries Fencible Cavalry for the honour they had done to the County during the period of its

service, and particularly for the gallantry shown in the suppression of the late rebellion in Ireland, and for the very spirited offer made by the regiment to extend their service to any part of the world where His Majesty may choose to send them.

On the 13th December, 1794, a meeting of the freeholders, Justices of the Peace, and landowners of the County was held to consider what was necessary for the defence of the County. It was called by the Lord-Lieutenant and his deputies, to whom belonged the duty of superintending preparations of this kind. It was attended by 79 gentlemen, of whose descendants, as far as I can ascertain, only 14 now hold property in this County. Apologies for absence were sent by 20 gentlemen, of whose descendants there are now 6 in this County.

In the absence of the Duke of Queensberry, the Lord-Lieutenant, the Duke of Buccleuch was called on to preside. The resolutions proposed were as follows:—

1. That, in the present state of this country, it is highly expedient and proper for us to come forward and avow our loyalty and attachment to the person and Government of His Majesty, our abhorrence of all attempts to disturb the internal peace of the country, and our firm determination to support its law and constitution, as the sources of that genuine liberty and unexampled prosperity which all ranks of the people in it have so long enjoyed.

2. That we will cheerfully unite in supporting the Civil Magistrate, and in making every loyal and constitutional exertion to suppress internal tumult or sedition, and to repel the invasion of our foreign enemies.

3. And that, for the promotion and accomplishment of these important purposes, we will heartily co-operate with the Lord-Lieutenant of the County and his deputies in whatever measure may, according to circumstances, be thought proper to adopt.

A Committee of ten were afterwards appointed to assist the Deputy-Lieutenants.

Early in 1795 the inhabitants of Dumfries raised a Volunteer corps. We transcribe below the principal portion of a curious document:—

Offer of Service, by certain Loyal Inhabitants of the Town of Dumfries, and Rules, Regulations, and Bye-Laws framed for their Government in a Military Capacity.

We the subscribers, all inhabitants of the burgh and neighbourhood of Dumfries, within the county of Dumfries, do hereby declare our sincere attachment to the person and government of His Majesty King George the Third; our respect for the happy constitution of Great Britain; and our

firm resolution, on every occasion, to protect the lives and properties of ourselves and our fellow subjects from every attempt of the ambitious and turbulent who threaten to overturn the laws of our country, and who, by anarchy, sedition, and bloodshed may endeavour to destroy the sacred bonds of society ; and, as we are of opinion that the only way we can obtain a speedy and honourable peace is by Government vigorously carrying on the present war, humbly submit the following proposals to His Majesty for the purpose of forming ourselves into a volunteer corps, in order to support the internal peace and good order of the town, as well as to give energy to the measures of Government, to wit.

I. That we shall form ourselves into a corps, consisting of two companies of infantry, not exceeding fifty men each, including commissioned and non-commissioned officers, to serve under the Lord-Lieutenant for the county of Dumfries, or his Deputy for this district, during the present war, without pay, and find our own clothing.

II. That each person enrolling himself into the said corps shall be approved of by the Lord-Lieutenant of the county or his Deputy, and shall take the oath of allegiance.

III. That each company shall have a captain and two subalterns, and the whole commanded by a Major-Commandant.

IV. That the officers shall have temporary rank from the King.

V. That the corps shall be allowed to choose their own officers, who are to be approved of by the Lord-Lieutenant or his Deputy.

VI. That the corps shall not be obliged to march more than five miles from the town of Dumfries.

VII. That Government shall furnish arms, accoutrements, pikes, and drums, and pay one fifer, one drummer, and one drill sergeant for each company ; and the corps shall return their arms and accoutrements when demanded.

VIII. That the members of the said corps engage to serve as aforesaid only when within the burgh or neighbourhood of Dumfries, and called on in aid of a civil magistrate, for the preventing or suppressing of riot, tumult, or disorder.

IX. That the corps shall choose the commissioned officers as aforesaid by ballot ; and the non-commissioned officers shall be chosen in the same manner by their respective companies.

X. That the corps shall turn out for the purpose of discipline as often as may appear necessary to the commanding officer ; and shall, when drawn up under arms, observe the most profound silence, pay all due respect to their officers, and implicitly obey orders without reply.

XI. That all persons wishing admission into this corps shall make application to the secretary, who shall mention such application before the committee of management, a majority of whom shall have power to admit ; and upon any offence or impropriety of conduct committed by any of the members of this association, and a complaint thereof made to the said committee, and a proof of such offence or impropriety brought, the said majority shall have it in their power to pass censure, or even to expel from the corps.

XII. That the corps request to be allowed to assume the name of "The Royal Dumfries Volunteers;" and, for their uniform, to wear a blue coat half lapped with red cape and cuffs, and gilt buttons, with the letters R.D.V. engraved on them; a plain, white Cassimere vest, with small gilt buttons; white trousers, made of Russia tweeling, tied at the ankle; white stockings; a black velvet stock; hair to be worn short, or turned up behind; a round hat turned up on the left side, with a gilt button, a cockade, and a black feather; their shoes to be tied with a black ribbon; and the only distinction between the officers and privates, in point of dress, is that the Major Commandant and two Captains are to wear each two epaulets, and the other commissioned officers one.

Among those who were enrolled in the Royal Dumfries Volunteers was Robert Burns. The poet did service by the pen as well as the sword, and the well-known poem, "Doth Haughty Gaul," expressed the feeling of the loyal inhabitants. On the 21st April, 1795, the letter was received accepting their offer, and the Volunteers were afterwards duly enrolled. The officers were A. S. De Peyster, Major-Commandant; John Hamilton and John Ferguson, Captains; David Newall and Wellwood Maxwell, Lieuts.; Francis Shortt and Thomas White, Second Lieuts. On the King's birthday following, June 4th, colours were presented to the Volunteers in Queensberry Square by Mrs De Peyster, wife of the Colonel, who was attended by eighteen ladies. Dr Burnside consecrated the colours. Mrs De Peyster when presenting the colours, said:—"I beg leave to observe that our device is St. Michael, the tutelary Saint of the town, and as that Saint is here portrayed trampling the serpent under his foot, so the R.D.V. will, in support of the civil power, trample on all who shall offer to disturb the peace and good order of this town and its neighbourhood, and shall dare to raise their hands against the King and constitution." Colonel De Peyster and Dr Burnside both made speeches. The Grant Regiment of Fencibles, which were then quartered in Dumfries, were present at the ceremony. The Volunteers afterwards dined together in the King's Arms, and at six o'clock they went with the Magistracy to the Court-house to drink the King's health. What was thus done in Dumfries was probably done in other parts of Dumfriesshire, but of this I have not been able to find any record. In 1797 the Government appear to have been seriously alarmed by the prospect of an invasion, and early that year a communication was made to the Deputy-Lieutenants of Dumfriesshire by the Lord-Lieutenant asking them to suggest what measures should

be taken for the defence of the County. A letter was also sent from the Home Secretary asking them to ascertain the amount of live and dead stock in the parishes within ten or twelve miles from the sea, and to consider the methods by which such could be removed inland in the event of an invasion. The Deputy-Lieutenants, in reply, wrote to the Duke of Queensberry in regard to the suggestion made by the Home Secretary, and stated that, "with great submission, we beg here to state it as our opinion to your grace that we think such a measure at present unnecessary, because from the situation of the Firth on the Border of this country the navigation is so very difficult and the water so shallow that no vessels of force or any considerable burden can possibly approach this county. In the next place, we are really apprehensive that taking such an account would be productive of dangerous consequences, and we are unwilling to increase the alarm which has already been given to credit and paper currency, but should the measure directed by the Duke of Portland afterwards seem necessary, it shall be instantly carried into effect." The Deputy-Lieutenants further stated that in their opinion the best method of defence would be the raising of volunteer corps on a similar plan to the one adopted in the Lothians and other counties, and in order to carry this proposal into effect they suggested a great County meeting. A meeting of this kind was held on March 4th, 1797, and was attended by 85 gentlemen, of whom 16 are still represented in the list of Dumfriesshire landowners. The meeting proposed that all between 15 and 60 years of age should be enrolled, clothed, and trained to arms under the authority and terms of the Volunteer Act. They also desired to express their confidence in the credit of the banks, and ordered that it should be known that they were willing to receive in payment the notes of the banks. 1000 copies of the resolutions of the meeting, with declarations appended as to the terms of service, and 1000 copies of a certificate to be given to the volunteers, were afterwards printed, and parcels of these were sent to the Deputy-Lieutenants who had charge of the nine districts into which the County had been divided for the purpose of military administration by the Deputy-Lieutenants.

These preparations for a further enrolment of volunteers appear to have been interrupted or abandoned by the necessity of carry-

ing into effect an Act which the Government passed in July of the same year for raising by ballot 6000 militia in Scotland. This Act provided that this force should be raised in quotas from the different counties, and that these should be provided by a ballot taken in every parish from the lists of men between the ages of 18 and 23. Those exempted were those serving in the regular army or on half-pay, professors, clergymen, schoolmasters, articed clerks, apprentices, sailors, and all who had two children born in wedlock. The number liable to serve in Dumfriesshire was 1094, and the number called on to serve was 247. The carrying out of the Militia Act was everywhere unpopular. The people said that 20,000 Volunteers had been raised, and large sums given in voluntary subscriptions, and it was insinuated that the limitation in regard to being called to serve only in Scotland would be departed from when the force was embodied. In Dumfriesshire the dissatisfaction was great. On the 27th Aug., 1797, the Duke of Buccleuch wrote to the Home Secretary from Langholm :—

I came here on Friday, the 18th, hoping to have some repose after many months' attention to my duty as Lord-Lieutenant of the County of Mid-Lothian. When I left Dalkeith I had no idea the execution of the Militia Act would cause any disturbance in our county. If I could have foreseen it, I would have remained at my post. On Sunday, the 20th, I was informed that some persons had pulled down the lists from the church doors in the parish of Canonbie, and that the parish registers were to be burned the next day. I immediately on Monday got together about thirty of the heads of families in the School-house to endeavour, if possible, to prevent any further violence. I was informed that about 300 young men had, on the night of Sunday or early on Monday, taken by force the books from the schoolmaster's house. I said everything I could to bring them back to a sense of their duty. At the same time, I told them I was resolved to bring to justice the rioters. Those present were certainly not concerned, being mostly heads of families, and well known to me. Everything has been quiet there since. But in Annandale the mob has been most outrageous, insulted Deputy-Lieutenants, drove them from their meetings, exacted oaths and promises that they will not proceed further in this business—in short, they have been guilty of open rebellion. The constables dare not appear, and the gentlemen of the county dare not show their faces in the towns and villages. God knows how this will end. Thank God all my tenants are quiet, well-affected people, and attached to my family. I have this moment received an express from the Advocate wishing I would come to Edinburgh immediately. I shall therefore go to Fleurs on my way to know how matters stand in that county. Rutherford has been almost killed ; Mark Pringle and the other Deputies driven out

of the town of Selkirk by a mob from Galashiels and Melrose, and some country people, with some of the people of the place. You will have heard what has been going on in other places better than I can inform you. I have been too much taken up with what has passed in this neighbourhood to attend to the reports from other quarters. Are such people to be trusted with arms after what has passed? That is for Government to determine. Examples, however, must be made of those who have so openly and outrageously broken the law of the country, insulted and ill-used magistrates in the discharge of their duty, and set at defiance all authority. I leave the Duchess of Buccleuch and daughters in the hands of my tenants. Where can they be better; certainly not further north; perhaps further south would be better at this moment. They can from this place soon pass over the Borders.

In a letter written five days later the Duke says—

I have left the Duchess and family at Langholm in the safe custody of my tenants, who swear they will spill the last drop of their blood rather than that she or the family should receive insult or injury during their residence among them. This was communicated to the Duchess upon my leaving Langholm.

On the 25th August there was a riot in Dumfries, and the windows of the School-house broken. On the 1st September Mr David Staig, D.L., then Provost of Dumfries, wrote a letter from Dumfries to the Duke of Queensberry, the Lieutenant of Dumfriesshire, which was forwarded by him to the Home Secretary:—

The opposition to the Militia Bill seems general throughout Scotland, and nowhere more than in this part of the country. There is not a Deputy-Lieutenant that has not been threatened with instant destruction. Sir Wm. Maxwell, Colonel Dirom, and Mr Graham of Mossknowe (Deputies) had a meeting the other day in their districts, and were most grossly insulted by an enraged mob, and before they were allowed to depart were forced to sign an obligation on stamped paper that they would proceed no further with their business. Sir Robert Grierson and Mr Dalziell of Glenæ, Deputies, were forced to write similar obligations to save their lives and property. Mr Greig, a Deputy-Lieutenant at Moffat, was deforced, and his papers taken from him; but being supported by a party of dragoons in another parish yesterday, an attack was made upon them by a riotous mob, and a good deal of blood was shed, but I have not heard that any lives were lost.

These disturbances caused delay in carrying out the provisions of the Militia Act, and a new Act had to be passed extending the time when the ballot was to take place. On the 4th May, 1798, at a meeting of the Court of Lieutenancy, presided over by the Earl of Dalkeith, and attended by 14 Deputy-Lieutenants, of

whom 6 are still represented by their descendants among the landlords of Dumfries, the date of the ballot was fixed for the 13 districts of the County, and the Deputy-Lieutenants of each district were directed to superintend the same. It was also agreed that farmers and farmers' sons should be recommended to join one or other of the Yeomanry troops to be established in the County, and each Deputy-Lieutenant was enjoined to establish, if possible, at least one Volunteer Company in his district. The Dumfries Militia were embodied in June, 1798, and along with the Militia of Peebles, Selkirk, Roxburgh, Kirkcudbright, and Wigtown they formed what was known as the Dumfries Regiment of Militia, or No. 4 of the Militia of North Britain, and they remained embodied till the peace of Amiens in 1802. The minutes of the Courts of Lieutenancy contain a complete list of the 247 men who were balloted to serve, with the parishes to which they belonged.

In most cases the men either provided substitutes or paid the penalty of £10, which was used by the commanding officer to provide bounties for men to supply vacancies. In 1799 a new Act was passed which required the Court of Lieutenancy to prepare a list of the men in every parish between the age of 19 and 30. After much trouble and the hearing of many appeals this list was made up. It extends over 100 pages of the minute book of the Court of Lieutenancy, and contains the names of 2424 men, all arranged according to their parishes. In 1798 subscriptions were sent from the inhabitants to aid the Government in providing for the defence of the country. The town and parish of Dumfries gave £1622 19s 10d; Kirkmahoe, £119 1s 6d; Holywood, £185 17s; Lochmaben, £20 17s 10d; Glencairn, £101 12s; and Moffat, £24 6s. The subscription lists show that these sums were subscribed by all ranks of the people.

After long negotiations in March, 1802, the Peace of Amiens was signed. In April of the same year the Dumfriesshire Militia were disembodied, and it may be supposed that the Volunteer corps also ceased to exist. The conduct of Napoleon Bonaparte soon made it plain that this peace could not long be maintained, and in May, 1803, preparations at the French naval ports hastened a declaration of war. During that year and the following year an invasion by Napoleon seemed imminent, and preparations for resistance were carried on with great activity. It is said that

at this period 300,000 Volunteers were enrolled. We can show that Dumfriesshire was not lukewarm in the cause. After war was again declared, military preparations were made under new Acts of Parliament. The Militia Ballot was made to embrace men between 18 and 45, and of those liable to serve there were reported to be in Dumfriesshire 5597. The quota balloted for was 284. The men were assembled on April 5th, 1803. There is no evidence that on this occasion there was any discontent similar to that which existed at the embodiment of the Militia in 1797. In nearly every case the men actually enrolled were substitutes. The penalty for not serving or not procuring a substitute was £10, but a little later (26th May) in the same year it was raised to £15. On the 15th July, 1803, there was a special meeting of the Court of Lieutenancy, when such resolutions were passed as became what is termed in the minute "a crisis when the empire is threatened with destruction, its existence as a State menaced with annihilation, and its inhabitants at large held out as objects of general pillage and confiscation." It was agreed that the whole inhabitants between fifteen and sixty years of age, and any healthy men who were above that age, should be invited to meet the Deputy-Lieutenants of the districts in their respective parish churches, and should be asked in what manner it is their intention to act should their country be invaded—whether (1) by engaging to assemble in arms either mounted or on foot in the event of invasion; (2) by engaging to serve as pioneers; (3) by engaging to serve in the removal of live stock; (4) by engaging to provide carts, horses, and drivers for the removal of dead stock or the transport of military stores, provisions, or troops; (5) by engaging to furnish Government for its armies with flour and bread. It was also agreed to intimate to the inhabitants that in the event of its being necessary all live stock were to be driven inland—live stock in the maritime parishes and towns of Annandale and Eskdale to the upper districts of Eskdale and those adjoining in Selkirk; and the live stock from the maritime and town parishes of Nithsdale to the districts connected with the source of the Cairn, as well within the Stewartry of Kirkcudbright as in the County of Dumfries.

Among other resolutions the meeting resolved "that the inhabitants be informed that however formidable and numerous

the forces by sea and land may be by which the First Consul of France now intends to invade our island, that nevertheless his forces by sea are neither so numerous nor so formidable as those which on so many occasions during the late war were beaten and destroyed by the fleets of Britain; that his land forces are no other than such as, although superior in number, our countrymen so recently encountered and subdued on the plains of Egypt; and that this same First Consul of France is no other than that General Bonaparte who at the head of a numerous army so long besieged in vain a handful of British troops shut up within the mud walls of Acre, from before which weak and unfinished post he at length retired defeated, disgraced, and covered with infamy. That the people be desired constantly to keep in mind that history affords no example where the inhabitants of a country united and faithful to each other were ever conquered by a foreign enemy." One response to this was the following letter from Mr Gibson, of the King's Arms Hotel, Dumfries, which gives a glimpse of the resources of that posting establishment in July, 1803:—

I think it incumbent on me at this momentous period to contribute my sum for my King and country. I beg leave to offer for conveying stock and property of any kind 17 horses, 5 chaises, 3 carts, and drivers for the same.

The parish of Ruthwell promised to furnish ninety volunteers, seventy carts and horses, and fifty drivers. The manager of the mines at Wanlockhead wrote to the Lord-Lieutenant as follows—

Wanlockhead, 1st August, 1803.

My Lord,—I have the honour to enclose a signed list of 110 miners, their two overseers, and myself, as manager of the Wanlockhead mines, who offer their services as a corps of Volunteer Pioneers, providing ourselves with pioneering and entrenching tools, and be ready to march, in case of invasion, with ten days' provisions. I have also to enclose a return of pioneering tools fit for service. The Mining Company of Wanlockhead authorises me to offer for the general service of the country whatever gunpowder they may have in store for blasting the mines, which on an average will be about 800 lbs. weight, and a proportionable quantity of musket balls, on being provided with Government patent moulds for casting them. The miners are ready to be trained to whatever exercise is thought necessary—the only difficulty is to find a tolerably flat piece of ground within six miles of the mines proper to exercise even a company of fifty men. But that a company of pioneers (which as miners we are well adapted to), should be able to march without confusion, this may be

thought all that is necessary. Wanlockhead is on the height of the County, between the east and the west coast, 47 miles south-west of Edinburgh, and about 30 miles north-east of Dumfries.—I have the honour to remain, my lord, your Lordship's obedient servant,

GILBERT LAING.

The most memorable response to this appeal was a letter from Mr Miller of Dalswinton, which was read at a meeting of the Court of Lieutenancy held on the 24th August, 1803.

Dalswinton, 24th August, 1803.

Dear Sir,—Having expended in a long series of hazardous experiments ten thousand guineas with a view to benefit mankind, I am now perhaps not so rich as I was, but I am more careful of what I have, and am a great economist. As such, I wish to insure my property, my share in the British Constitution, my family, myself, and my religion against the French invasion. As a premium, I offer to clothe and arm with pikes 100 men, to be raised in this and any of the neighbouring parishes, and to furnish them with three light brass field pieces ready for service. This way of arming I consider as superior for infantry either for attack or defence to that now in use; but as to this Government must determine. I am too old and infirm to march with these men, but I will desire my eldest son to do so. He was ten years a soldier in the foot and horse service. In case of an invasion, I will be ready to furnish when requested 26 horses, 16 carts, and 16 drivers, and Government may command all my crops of hay, straw, and grain, which I estimate at 16,700 stones of hay, 1400 bushels of peas, 3000 bushels of oats, and 3080 bushels of barley. You will please to transmit my offer to the Lord-Lieutenant of the County. If the French are rash enough to land on our shores, they will find to their cost that riches acquired by useful and honourable means have not the effect to enervate a people. On the contrary, riches so obtained are a sure proof of a happy constitution and a mild government, to which all wise, good men must necessarily be attached.—I am, ever yours, &c.,

P. MILLER.

To David Staig, Esq.,
Deputy-Lieutenant, Dumfries.

On the 31st August, the Deputy-Lieutenant proposed a scheme for a ballot of 213 men, being the quota of the Army of Reserve falling on the County of Dumfries. The total number liable to serve was stated to be 4803. The penalty for failure to appear in this levy was £20. In every case either a substitute was found, or the money was paid. On the 23rd November, 1803, the condition of this quota was reported as follows:—With the 26th Regiment, 104; with the 5th Battalion of Reserve, 30; with Captain Douglas at Dumfries, 3; volunteered for general service, 7; number still required to complete complement, 69—total, 213.

In the *Dumfries Weekly Journal* of various dates about this period there are records of enthusiastic meetings in the different parishes, at which the inhabitants cheerfully offered to act as Volunteers. On the 21st September, 1803, it was reported at the meeting of Deputy-Lieutenants that 3480 men had offered to serve as volunteers, or double the number limited by Government. The meeting then fixed the establishment of volunteers at 1704, as restricted by the official communication. This did not include 52 men from Eskdale, who offered to serve on horseback; the 110 men from Wanlockhead who were willing to serve as pioneers; a company of artillery in Dumfries, which numbered 50, and a troop of Royal Dumfries Yeomanry, numbering 3 officers, 3 non-commissioned officers, and 84 privates. Dumfries was to furnish three companies, with 80 rank and file each. Annan two companies of the same strength, and Kirkmahoe, Tinwald, and Kirkmichael one also of 80 rank and file. The following were to have a company with 60 rank and file:—Johnstone and Wamphray; Hutton and Applegarth; Lochmaben; Dryfesdale and St. Mungo; Dunscore and Holywood; Sanquhar; Kirkconnel; Durisdeer and Penpont; Glencairn; Morton and Closeburn; Tynron and Keir; Caerlaverock and Ruthwell; Cummertrees and Dalton; Westerkirk, Ewes, and Eskdalemuir; Langholm and Canonbie; Graitney, Dornock, Kirkpatrick-Fleming, and Half-Morton; Torthorwald and Mouswald. The selection was made beginning with the youngest men and men unmarried, or men without children. Those whose service could not be accepted owing to the Government limitation were to be allowed to serve provided they furnished their own clothing and arms, and agreed to serve without pay. The Volunteer Infantry was divided into three battalions—the Dumfries and Annan Battalion, commanded by Col. De Peyster; the Nithsdale Battalion, commanded by Col. Wight; and the Eskdale Battalion, commanded by Col. Douglas. By an Act passed on 27th July, 1803, the Government had power conferred on them to make a levy *en masse* of the male population between 17 and 55 years of age, and for this purpose the Lords Lieutenants were required to make out lists of the men in the counties under three classes—(1) those who were 17 years of age and under 30 who were unmarried or had no children under ten; (2) those who were 30 years of age and under 50 who were similarly situated as regards family circumstances; (3) those who

were from 17 to 30 years of age who were or had been married, and had not more than two children under ten years of age. The number of volunteers in Dumfriesshire enrolled made the levy *en masse* unnecessary, but the lists were carefully made out. They were as follows:—Number in first-class effective, 3442; number in second class effective, 677; number in third class effective, 842; number in fourth class effective, 3409. The number of clergy, licensed teachers, medical men, and constables, who were all to be exempt from this levy, was returned at 43, evidently a very defective return, and the number of infirm at 408. On 6th September, 1803, the county gentlemen assessed the county for £1190, to give aid to the volunteers as to clothing. On 10th October the ministers of Dumfries handed to Col. De Peyster £18 7s 6d, being a contribution from the Presbytery towards the expense of the volunteers. The inhabitants of Dumfries subscribed £305 13s 6d. On November 12th colours were presented to the Volunteers of Dumfries by Col. De Peyster, who addressed them “in a most eloquent, impressive, and loyal speech.” The Rev. Dr Burnside consecrated the colours. He also addressed the men, and it is recorded that he said—“If this corps should ever meet in ‘dread array’ in defence of their native soil the wretched slaves of the tyrant usurper of the throne of the Bourbons we are proud to predict that their veteran commander will lead them to glory and victory, and that these colours will be found a lasting memorial of the spirit and patriotism of this town.” The expectations of the people may be gathered from this extract from the *Dumfries Weekly Journal* of 1st November, 1803: “Every day we are taught from all quarters that the awful day approaches. The magnitude of the preparations that have been made against us, and the malignity of the designs proposed to be effected by these preparations, are such that if there be in the bosom of any one amongst us any determination other than to conquer or to perish in resisting these designs and these preparations, the person who harbours such a sentiment is unworthy of the name of Briton.” The Volunteer corps were not long left without instructions, which showed that serious work might be expected.

On 3d November, 1803, instructions were laid before a meeting of Deputy-Lieutenants, with respect to the movements of the Volunteers in case of the appearance of the enemy. In the

event of an alarm from the Firth of Forth, the Annandale and Eskdale Battalion was to assemble at Moffat, and march to Edinburgh by way of Linton ; the Nithsdale Battalion was to assemble at Sanquhar, and march to Edinburgh by way of Muirkirk ; and the Dumfries and Annan Battalion, under Colonel De Peyster, was to assemble at Thornhill, and march from thence by Leadhills and Biggar ; and the whole force was ordered to unite at Linton, and proceed from thence in a body to Edinburgh. In the event of an alarm from Cumberland or Galloway, the Annandale and Eskdale Battalion was to assemble at Ecclefechan ; the Nithsdale and also the Annan and Dumfries Battalions at Dumfries. And in the event of the alarm coming from Cumberland, the two last were to assemble at Annan. To provide for the maintenance of order in the event of the Volunteers being called out to repel an invasion companies of spearmen were enrolled. Their duties were to be—"In the absence of the Volunteers, to act with vigour in supporting the civil magistrates, protecting property and preserving the peace by quelling tumults or riots, apprehending disorderly persons, and taking such other measures as may be deemed necessary for that purpose. And in the event that prisoners of war shall be marched into and conveyed through this county, such companies shall guard them from parish to parish." Each company was to be commanded by a respectable person, either a landholder or a farmer of character, and under him one or more subalterns and one or more persons in the quality of sergeants. The number of this force in the county was a thousand. The total number of men under arms in the county at this period must have been about 3000. In addition to this force, during the whole period of the French war a Regiment of Fencibles or Militia was quartered in Dumfries, and sometimes also a Cavalry Corps. Another sign of preparation for active service was the appointing (18th December, 1803) of the places where beacons were to be erected to assemble the Volunteers when intelligence was received of the landing of the enemy. The Beacons in Dumfriesshire were the Hill of Repentance, the Barhill of Tinwald, the Wardlawhill of Caerlaverock, Lagg or Blackwoodhill in the parishes of Dunscore and Keir. It was ordered that a temporary hut should be erected beside each beacon, and that an attendant should be there both by day and by night. Tar barrels and other combustibles were to be pro-

vided, but in the day time the signal was to be given by lighting wet straw or other such material as would yield most smoke. On 24th October, 1804, a return was ordered of the number of carts, carriages, and horses which had either been offered voluntarily or were procurable on short notice in the event of a large body of troops being ordered to march through the country. Unfortunately this return has not been recorded. The league which Pitt made among the Continental Powers against Napoleon greatly increased the difficulties of concentration of the French Army for an invasion of England, and the great victory of Lord Nelson at Trafalgar, in October, 1805, so shattered the power of the French navy that for a time the great fear of an invasion passed away. The Militia after this date were reduced in numbers; the constant drilling of Volunteers was less ardently carried out; and the beacons had no longer to be watched by night and day.

There is evidence in the minutes of the Dumfriesshire Court of Lieutenancy that the discipline of the Volunteers of this county was not always what could have been desired. It is probable that the same happened elsewhere, and it is conjectured that this led the Government to pass a measure known as the Local Militia Act, which provided a force subject to more stringent rules. This Act, which was passed in 1808, provided that each county should raise a force called Local Militia, six times as numerous as the quota which it had to provide for the regular militia. They were liable to be called up for training twenty-eight days in each year, but were not to be permanently embodied or marched beyond their own county unless in case of an invasion, when they might be ordered anywhere within the United Kingdom. The Volunteers were allowed to transfer their services to the new force, and in that case were each to receive a bounty of £2 2s. Any deficiencies after the transfer of Volunteers were to be filled by a ballot among the men between eighteen and thirty years of age. In this case service was compulsory, and neither by the payment of a penalty nor the providing of a substitute could any one claim exemption. The Dumfriesshire Volunteers appear to have bodily transferred their services to the Local Militia. The Local Militia, like the Volunteers, was formed into three regiments—Dumfries and Annan, with 410 men; the Nithsdale, with 610; and the Annandale, with 600

men. Each parish was required to provide a certain number of men, and as it happened when the Volunteers were transferred that some parishes had more representatives than were required and others had too few, a scheme was made out by which the supernumeraries were appropriated to the parishes where deficiencies existed. Subsequently the regiments were recruited either by voluntary enrolment or by conscription. There is evidence that annually or less frequently they were called out for twenty-eight days' service. Correspondence more than once ensued, and at last a law suit was carried on as to their right to drill on the Kingholm Merse. At length the long time of suspense came to an end, and in the minutes of the Court of Lieutenancy of 26th July, 1814, there is mention of a letter from the Lord-Lieutenant, enclosing a letter to His Grace from Lord Sidmouth, Secretary of State, transmitting a resolution of the House of Lords expressing the thanks of that House to the several corps of Local Militia, of Yeomanry, and of Cavalry and Infantry which had been formed in Great Britain and Ireland during the course of the war, and requesting that the Lord-Lieutenant will make the necessary communication of the same to the different corps of the County of Dumfries. In 1814 the Militia were disembodied, not to be again embodied till the time of the Crimean War. In 1814 the Volunteers also ceased to serve, and no similar force came into existence till 1859, when the foolish speeches of certain French colonels called to arms the great citizen force which year after year is becoming more and more efficient.

3rd April, 1891.

Mr JAMES BARBOUR, V.P., in the Chair.

Purchase.—Six volumes of the *Dumfries Weekly Journal*.

Donations.—The Report of Marlborough College Natural History Society, 1890; Transactions of the Edinburgh Geological Society, 1890; The Essex Naturalist, October and December, 1890; Annals and Transactions of the New York Academy of Sciences, 1889-90; Proceedings of the Rochester Academy of Science, 1889-90 (New York State); Four Geological Specimens, presented by Mr James Dairon; Specimens of Roses, by Mr J. Fingland.

COMMUNICATIONS.

I. *The Lower Carboniferous System in Dumfriesshire.*

By Mr JAMES DAIRON, F.G.S.

It may be recollected that the last papers I read before this Society were upon the Silurian System, with its graptolites, so celebrated for their abundance, and also the beautiful state of preservation in which they are found around Moffat. Among the numerous places, both here and abroad, I have seen nowhere that can surpass Dob's Linn, in Dumfriesshire. I have thought it might be acceptable to make a change for the night to the carboniferous system. It is not very extensive in Dumfriesshire. Still there are a few places worthy of a visit of the geologist. The carboniferous system lies on the top of the old red sandstone or Devonian strata, but are known from the vast mass of vegetable matter which occurs in the lower members of the carboniferous system. It is to the fact that the chief quantity of the solid element being carbon that the system takes its name, such a mass which has formed beds of coal. Coal being only mineralised vegetation finds its entry into the mass of the bituminous or coal-formed shales, and gives many of the sandstones and limestones of this formation a carbonaceous well marked appearance. The system is generally divided into the three well-marked groups—the lower coal measures or carboniferous slates, the mountain limestone, and the millstone grit. The plants most characteristic of the group are—*Sphenopteris affinis*, *bifida*, *S. linearis*, *pecopteris*, *heterophyllum*, *neuropteris loshii*, *calamites*, *cannæformis*, *lepodostrobus variabilis* and *ornatus*, *lepidophyllum intermedium*, *stigmaria ficoides* and *stellata*, with *sigillaria pachyderma*, and *oculata* with *knorria* of various species, and *favularia*.

Lower Coal Measures or Carboniferous Slates.—This group is intended to combine all alternations of strata that lie between the old red sandstone and the mountain limestone. In some districts it is not so well developed. In others it attains a thickness of several thousand feet. In Scotland—in Fife and the Lothians—it has none of the slaty character, but consists principally of thick bedded white sandstone, dark bituminous shales frequently embedding bands of ironstone, thin seams of coal, and peculiar

strata, either of shell limestone, of argillaceous limestone, thought from its fossils to be of fresh water or estuary origin. Unless in its fine white sandstone got in the neighbourhood of Edinburgh, and sent over the country for building purposes, in its fine grained estuary and shell limestones (Burdiehouse and Burntisland), and in the greater profusion of its shells and fishes, the lower group, as developed in Scotland, differs little in appearance from the upper group. Hence the term lower coal measures generally applied to it in this country. If we look at the lower coal measures in the mass there cannot be a doubt that they were laid down under very different conditions from the old red sandstone beneath and the mountain limestone above. Both of these formations are truly marine, the yellow sandstones being filled with true oceanic fishes, and the mountain limestone crowded with marine shells and corals. The lower coal measures, on the contrary, have more of a fresh water than of a salt water aspect. Coralloid corals are seldom obtained in their strata; their shells are mostly esturine; their plants seem to have grown and flourished in marshes and delta jungles, and many of their fishes are large and of a saurial description. Under these circumstances, we may be quite safe in regarding it as a separate group. As a whole, the lower coal group in Scotland is eminently characterised by fresh water or estuary remains, though in several parts we may find seams of limestone and ironstone occur frequently, containing *enocrinal joints*, *retipora*, *palaechinias*, *murchisonia*, and others; thus showing that during the laying down of the strata there were various alternations of marine and fresh water conditions. The plants of this group are much the same as those already before described. Of the animal remains the most characteristic are most minute crustaceous *Cypris*, *Scotoburdigatensis*, and *Hilbertii*, which abound in all the limestones and shales. There are, however, frequent inter-stratifications of igneous rock and precipitated showers of volcanic ash, as if the seas and estuaries of deposit had also been the seats of submarine volcanoes and craters of eruption. The iron which impregnated the waters of the old red period, and coloured with rusty red the whole of that system, now appear in the segregated form of thin layers and seams of ironstone. At this point I think we might say a few words on some of the Dumfriesshire limestone quarries, which I visited some time ago, then possessed by the late Mr

Ferguson of Donkin, Kirtlebridge, and extensively wrought by him then. A few minutes takes us to the quarry, and the same time to where the lime stone is burnt, and at the same spot are some great heaps of unburnt limestone, and from these heaps I got some very fine specimens of corals, which were easily polished by rubbing on a piece of sandstone and water, then with water of Ayr stone to a fine surface. If water is then used, and if it is finished off with putty powder made up into a paste, and rubbed up with a piece of flannel, it will be very pretty. When walking over the quarry there are some good sections to be seen there, and we should notice the strike and lie of the strata. Some of the quarrymen may have some specimens laid past, and should be asked. Among the fossils which are obtained in this locality are *Orthocrotite* of a large size, also *actinoceres* of great size, about 8 inches diameter at top, running to a point, some of them 6 and 7 feet long. The cottagers at Blacketridge make gate posts of them. Bivalve shells are *Productus giganteum*, *Productus semireticulatus*, and others, *Spirifer euomphalus*, *Bellerophon*, and many more, but they are difficult to take out of the hard limestone, and require a chisel and hammer. Fishes range through the system, but are most abundant in the limestone and lower measures. The fin spines of *gyracanthus* are also in other parts of the system, some 20 inches long. Some of the teeth of the large fishes are got 5-7 inches long. We also find a common fossil in the shales of the mountain limestone and coal measures, as we find in the secondary formations the *coprolite* or fossil excrement of fishes and saurians, in which are frequently found scales and pieces of shells and other remains of ancient life. In the coal measures those *coprolites* are no doubt those of fishes, and in many parts are so abundant as to make up the greater part of the stratum.

After having visited the quarries previously mentioned it would be well to visit Blacketridge Quarry. *Lithostrotion irregulare* (Philips), a rare coral, *L. junceum* (Ure), and many others are got at this quarry. It is just about two miles from Donkin lime kilns. After the limestone has been examined for a specimen of the coral on the top of the limestone collected for burning, we now get on to the main road. After passing to the other side we come to a road at right angles, where there are a number of cottages, and there always are a few fossils lying at

some of the windows, such as *Productus giganteum* and some others belonging to this formation—viz., the lower carboniferous.

II. Notes on the Genus *Rosa* in Nithsdale.

By MR JAMES FINGLAND.

A botanist of experience on a casual visit a few years ago to the neighbourhood of Sanquhar remarked that he had never seen a district so luxuriant in wild roses, and apparently so rich in variety of forms. Since then the result of examination of our local roses, though still imperfect, fully proves the truth of the observation which the visitor made. Only what applies to Sanquhar district still further applies to a large portion of Nithsdale. From below Auldgirth, following the river upwards on the alluvial soil and gravel beds, extending a considerable breadth in some parts, and on the banks and wooded sides of the more confined channel of the river in its higher reaches, the wild roses grow in great abundance, and afford ample opportunity for study. In early summer we admire the pure and delicate tints of the flowers, and in the first autumnal months we are no less attracted with the rich colouring of the hips or choups and the beautiful and varied foliage of the bushes, which then attains its highest development on the new and barren shoots of the year.

Dr Anstruther Davidson in his last communication to the Society on local botany, reported the finding of eleven varieties of *Rosa canina*. We are much indebted to him for this excellent introduction to them. Since then, from a collection which he made before leaving Sanquhar, some additional forms have to be recorded. And now, between us, other six varieties and three sub-forms are fresh records for Nithsdale. *Pruinosa*, *incana*, *Kosinciana* and *uncinella* (Besser), from Sanquhar, with *andevagensis*, *Watsoni*, *Malmundariensis* (Lej.) and *platyphylla* (Rau.) from Thornhill. Of the 32 forms of *canina* given in the 8th edition of the "London Catalogue," 17 are now ascertained to occur in the district. So little has been done in this genus in the South of Scotland, at least so far as I am aware, that we have scarcely any means of making comparison with other districts. The Clydesdale Flora contains nine forms of *canina*. A more recent work, however, the "Flora of West Yorkshire," enumerates about twenty; these obtained from a

very extensive and carefully botanised area. It is perhaps too soon to speak definitely of the distribution of the roses in our district, but apparently the greater number are met with in the main valley of the Nith, and often many varieties I have observed grow together in a small area. They appear to thin out somewhat in the side valleys, and the fewer number reach the base of our higher hills. Although from this height some are found with *Rosa mollis*, notably *subcristata* and *dumalis* descending throughout the range to sea level. The study of roses is rendered more difficult and confusing from the occurrence of approximate and intermediate forms. I have to acknowledge invaluable help from Mr Bennett of Croydon, in naming specimens and for his kindness in sending a collection to Mr Baker, of Kew, for inspection. I append a full list of the *genus* as found in Nithsdale by Dr Davidson and myself, which will bring it up to date and facilitate further search. In it are included a few intermediate forms which may be found interesting, having had the best authority for their recognition.

LIST OF ROSÆ.

1. *Rosa spinosissima*, Linn.
2. „ *mollis*, Sm.
3. „ var. *cærulea*, Woods.
4. „ var. *pseudo-rubiginosa*, Lej.
5. „ *tomentosa*, Sm.
6. „ „ var. *subglobosa*, Sm.
7. „ „ var. *scabriuscula*.
8. „ *rubiginosa* (an escape ?)
9. „ *canina*, var. *lutetiana*, Leman.
10. „ „ „ *dumalis*, Beckst.
11. „ „ „ „ f. *Malmundariensis*, Lej.
12. „ „ „ *urbica*, Leman.
13. „ „ „ „ f. *platyphylla*, Rau.
14. „ „ „ *arvatica*, Baker.
15. „ „ „ *dumetorum*, Thuill
16. „ „ „ „ f. *uncinella*, Besser.
17. „ „ „ *pruinosa*, Baker.
18. „ „ „ *incana*, Woods.
19. „ „ „ *tomentella*, Leman.
20. „ „ „ *andevagensis*, Bast.
21. „ „ „ *verticillucanthe*, Merat.

22. *Rosa canina*, var. *Kosinciana*, Besser.
23. " " " *decipiens*, Dumort.
24. " " " *glauca*, Vill.
25. " " " *subcristata*, Baker.
26. " " " *coriifolia*, Fries.
27. " " " *Watsoni*, Baker.
28. " " " *Borreri*, Woods.

INTERMEDIATES.

29. *Rosa canina*, form, near *vinacea*, Baker.
30. " " " *nearing subcristata*.
31. " " " *extreme subcristata*, hispid pedicels.
32. " " " *near coriifolia*.
33. " " " *verticillacantha*, with upright sepals.
34. " " " *near Reuteri*.
35. " " " *dumalis* leaf and *sphaerica* fruit.

III. *Annan in the Eighteenth Century.*

By MR FRANK MILLAR.

When the eighteenth century opened, Annan was not by any means in a flourishing state. It was no longer a place of military importance with a strong garrison, its fairs had ceased to attract visitors, and the trade of the district had been diverted into new channels, Lockerbie, Ecclefechan, Dalton, and Applegarth profiting at the expense of their once prosperous neighbour. The appearance of the town showed its insignificance. To the casual visitor the historic burgh seemed little better than an ordinary village of three or four hundred inhabitants. On each side of "the high town street" was an irregular row of stone-built dwelling houses, with dull little windows and thatched roofs. Every vestige of the ancient castle had disappeared, with the exception of the inscribed stone referred to in Pennant's "Tour in Scotland in 1769." The school-house, in which the children of the parish were instructed in English and Latin, was a wretched little building, with crumbling walls, situated in the gloomy church-yard. The tolbooth, where justice was dispensed by the provost and bailies, was new and unimposing, and a church less pleasing, from an æsthetic standpoint, than Annan kirk could not have been discovered in broad Scotland. There was danger in riding through the town, for the deep hollows and pits in the unpaved

street were many, and huge turf stacks encroached on the public way. More objectionable to the pedestrian than the piles of "divots" were the heaps of refuse, emitting odours not akin to those of "Araby the blest." If the sanitary condition of the place was unsatisfactory, the authorities could not justly be held responsible, as not infrequently they ordered cleansing operations and passed Acts forbidding the placing of "ashes," &c., on the street. On 31st October, 1717, they dealt comprehensively with the whole question of the improvement of the town.

"The said day they enacted and ordained that the hail middens with the turf and peat stacks be removed off the town streets, and the hollow places where the same stood or lay be filled up by ilk ane of the inhabitants to whom the same belonged, and the street be filled up before everyone's door to the middle of the street under the penalty of ten pounds money foresaid, to be paid by the transgressor in case of default. . . . The said day it was enacted and ordained that any that build within the burgh shall for hereafter always build the principal part of the building fronting to the forestreet of the burgh in a straight line, and that they plant timber for their yards in the terms of the Act of Parliament, and whoever does otherwise that his work be stopt by the Dean till he comply therewith."

The first improvement effected in Annan last century was the building of a bridge across "the drumlie river." The old ferry boat belonging to the burgh having become perilously rickety, the Magistrates and Council, in 1700, decreed its destruction, and instead of purchasing a new one they ambitiously commenced to build a bridge, hoping to be aided in their undertaking by the Marquis of Annandale, who had more than once rendered them financial assistance. Hampered in their operations by want of funds, they made slow progress, and at one time it seemed likely that the bridge would never be completed. On 3rd November, 1702, the Council finding that for half-a-year the men engaged in the work had received no wages, and considering that "the Marquis of Annandale his chamberlain, refused to clear and pay off what was resting to the said workmen," resolved to ask their Commissioner to Parliament to approach "my Lady Marquis of Annandale," begging her in her lord's absence to grant orders to satisfy the workmen, and offering any security available. The help desired was cheerfully given by Lord Annandale, and five years later a grateful Council unanimously agreed that, "for the great and good services done by my Lord Marquis to the burgh," his tenants should be exempt from the duty exigible on farm produce "brought through the said burgh, and liberties thereof."

The next important undertaking which engaged the attention of the burghers was the remodelling of their place of worship. That the church was not sufficiently commodious had long been felt, and at length the Council "did enter into contract with Wm. and John Anderson and James Stillie, all joiners in Annan, whereby they, the said joiners, should be obliged to put up seats upon the town's proportion of the Parish Kirk of Annan, and elect a loft upon and over the said proportion, and put up seats upon the said loft. The seats upon ye said proportion to consist of twenty-two in number upon the floor, and twenty-one seats in number upon the loft, besides the seats for the magistrates."

The erection of a gallery in the church was soon followed by another improvement. On 7th December, 1740, the Council unanimously agreed to add to the building a handsome steeple. "The said day the Magistrates and Council of the burgh being determined with all convenient dispatch to build and erect a steeple and put a clock and bells in it for the advantage and ornament of the burgh, and to the end that they may be the better enabled effectually to complete and finish the said work without bringing the burgh into more debt, have unanimously resolved to retrench and abridge the public expenses of the burgh, as much as possible consistent with the honour and dignity of the burgh. And therefore they enact and ordain that the public expenses of the burgh at entertainments, giving of burgesse tickets, and the meetings of the Magistrates and Council upon any of the burgh's affairs whatsoever shall not exceed the sum of Thirty pounds sterling money yearly from Michaelmas to Michaelmas." The worthy Councillors did not find it easy to reduce their "public expenses," and notwithstanding the good resolution adopted in December, 1740, the liquor bill of the burgh continued to amount to more than thirty pounds per annum. Owing to the state of the town funds, the publicans' accounts often remained unpaid for years. In September, 1763, it was agreed to make an effort to wipe out the accumulated debt of seven years. The treasurer received instructions to pay the publicans' bills in full, though they exceeded the authorised sum. "But as the town's revenue was much impaired, this was to be no precedent in time coming."

Many of the entries in the old Council minutes relate to convictions at the burgh court for "blood and riot," and other offences. It amuses one to pour over the yellow pages in which

are recorded, with quaint circumstantiality, the crimes and punishments of men and women whose graves in our quiet churchyard have been wet with the showers of a hundred and fifty springs. Assaults were very common, for the fierce old Border spirit was easily roused, and furious blows avenged the slightest wrong with startling swiftness. Even the excellent man who occupied the office of town-clerk had been fined for "blooding and stryking." At times people were attacked in their own houses by aggrieved neighbours. In minutes dated 6th January, 1702, we read :—

"The which day Herbert Wilkin, maltmaker, in the said burgh, being accused of going under clond of night unto the house of Robert Johnstone, tailor in said burgh, and of grievously beating and striking of Jean Gass, his wife, and the same being proven by witnesses and the said Herbert's own confession, was decerned in ten pounds Scots for an battery committed upon the said Jean Gass, conform to the Act of Parliament, and in forty pounds money foresaid to the party damnified and fiscal of court for the violence done, and ordains him to be imprisoned till he pay the same."

Offences against property were much less common than assaults. "Bairns, herds, and servants, were sometimes guilty of destroying and away taking of peas, beans, and potatoes, and stealing and cutting of neighbours' grass," but serious cases of theft rarely occurred. A case of unusual gravity is recorded in the following extract :—

"24th July, 1701.—The which day James Linton, carpenter in Annan, being accused of taking ane salmont fish from Christopher Irving, stepson to Matthew Ferguson in Annan, alleging the said fish was taken out of his nets, and it being proven by witnesses that the said fish was taken in the said Matthew Ferguson's nets, and that the said James Linton did away take the same from the said Christopher Irving. Therefore decerned and ordained to give back the said fish, and fined for the said crime in ten pounds Scots money, and ordained to be imprisoned till he pay them."

The punishments ordered by the Court were not exceptionally severe. The town boasted of stocks, but these were very seldom used. I know of only one case in which "putting in the stocks" was included in the sentence pronounced. Whipping was rarely inflicted, though, curiously enough, fishermen guilty of contravening the "mercat regulations" of the burgh were liable to personal chastisement, as well as to a pecuniary penalty. Fining was the common mode of punishment, and no doubt the "groates" and "pounds Scots" wrung from offending burghers constituted a large portion of the revenue of the town.

I may be asked whether the people of Annan were as much "given to intellectual pursuits" in the days when Blacklock experienced the bitterness of learning at the parish school as at the time when Carlyle first wielded the birch in the Academy? Were the writings of Cudworth and of Chillingworth studied by the devout burghers who every Sunday morning sat in their worm-eaten pews in the parish church listening to the lengthened discourses of the minister? Had the plays of Dryden and of Congreve penetrated to the town? I believe that there was in Annan more intellectual activity than in most places of the kind. It is certain that some of the burgesses were familiar with the productions of the best English authors. The father of Thomas Blacklock was but a bricklayer, yet he read the *Tatler* and *Spectator* and delighted in the works of Spenser and Milton, of Pope and Prior. Blacklock, as we learn from the narrative by Spence prefixed to the 1756 edition of his writings, was early taught by his father "and a few other friends" to appreciate the beauties of the masterpieces of English poetry. It is evident from the words of Spence, who was personally acquainted with Blacklock, that the bricklayer was not singular in his love of good literature—that even in the third decade of the eighteenth century Annan contained not a few men of real culture.

IV. *British Plants in Southern California.* By Dr ANSTRUTHER
DAVIDSON, Los Angeles.

When the writer of this touched Los Angeles, a stranger in a strange land, and began to examine its botanical wonders, amidst its varied and perplexing semitropic flora, it was cheering to find that, among the inanimate waifs of cultivation, many were old friends in changed but mostly improved circumstances.

With plants as with man changes seem to follow their migration, so that one can scarcely recognise them in their altered appearance. These variations alone would make an interesting paper, but at present I will confine myself to the communication of the different species of British plants here naturalised.

The native flora is somewhat semitropical in character. The dry warm summers parch the ground, wither up the grasses and annuals, and intensify the general sterile appearance of the whole country. With the advent of the winter rains all this is

changed. In a few days the hills show green with a carpet of clover (*Alfifuree*) and flowers rather than of grass; the latter, though in many places abundant, cannot be considered a feature of the indigenous flora.

Among the first to appear are *Brassica nigra* and *B. campestris*. The former species is one of the greatest pests of cultivation, and more detrimental to growing crops here than its better known relative *sinapis arvensis* (wild mustard) is to those of the British farmer. In the moist lands and grain fields, where it has secured a foothold, it grows most luxuriantly to a height of four to eight feet or more, with stems as thick as a walking cane, and forming with its interlacing branches thickets as impenetrable as brushwood. Popularly it is said to have been introduced at an early date by the Spanish monks. Whether this is really so or not I cannot authenticate, as the expression itself is very much akin to that of "came over with the Conqueror," and is subject, I fear, to like abuse. However introduced, its natural fertility, aided by the blackbirds and finches, has spread it over the length and breadth of the country.

The plantain, "the white man's foot," as the Indian calls it, is but casually represented, but that more typical representative of civilisation, the shepherd's purse, *Capsella bursa pastoris*, is here in abundance. In Britain one is too apt to forget that it is an introduction there, having followed civilisation from the Mediterranean shores, and it seems but fitting it should continue the Saxon's march in the peaceful settlement of the Western Continent. The common water cress, *Nasturtium officinale*, and candytuft, *Iberis amara*, escaped from cultivation are well established. The medicks are represented by *M. denticulata* and *M. sativa* (*Lucerne*, or *Alfalfa*, as it is here called), and are two of the most valuable fodder plants in California. *M. denticulata*, or burr clover, has by natural processes spread over the greater part of the lower country, and not only affords maintenance to stock in its green state, but also when matured its ripe burrs being greedily eaten by horses and sheep as they lie round the withered remains of the parent stem. It has one serious drawback, however; its burrs are the processes for perpetuation of the species, and in their attempts to spread themselves they get inextricably mixed among the coats of horses and sheep, and nothing short of removing the hair or fleece will suffice to clear

them. *Lucerne*, the *Alfalfa* of Californians, is sown down like grass on somewhat moist land, and under the genial influence of the western sun it grows luxuriantly. The crop, usually knee deep, is cut from five to seven times a year, and converted into hay. Once properly rooted it never requires re-sowing, and as proof of this it is authoratively stated that one of the fields sown by one of the early Spaniards has yielded five or six crops annually ever since and the last apparently as good as any. Along with these *Melilotus parviflora* grows in fair abundance, and is also useful for fodder purposes. Of native clovers there are over thirty varieties, some of which seem very valuable. So far the only British species observed is *Trifolium arvense* (white clover), and only as a casual among imported grasses. Of the *Caryophyllaceae*, *Silene gallica*, *Cerastium triviale*, and *Stellaria media* are sparsely represented. Only a few of the *Compositae* are represented; *Anthemis cotula* and *Silybum marianum* are not uncommon. *Taraxacum officinale* (dandelion) is merely a casual, and even where introduced seems to struggle for its bare existence. The sow thistles (*Sonchus oleraceus*) and *S. asper* are common in the waste grounds around the city lots, and contrary to general experience, both seem alike common. The genuine Scotch thistle has not yet arrived, probably because no Scotsman has been patriotic enough to introduce it. The native thistles are quite as unpleasant as they are generally made, but for some reason they seem very limited in numbers. I think, however, of all the introduced weeds *Malva borealis*, or the northern mallow, "takes the cake." Over the wastes, orchards, and cultivated grounds it is more or less prevalent, and where unmolested attains a height sometimes of 6 feet. Once established it is not easily eradicated, as it grows and matures fruit throughout the greater part of a season. The pretty storks bill, *Erodium cicutarium* and *E. moschatum*, known here by the Spanish name of *Alfilarce*, supply along with the burr clover the principal grazing in the earlier summer. In cultivated ground along the valleys and mesa or tablelands, it literally covers the ground in many parts. Though probably introduced by accident, its extensive distribution is mainly due to artificial means, and once introduced its natural fertility ensures its survival and increase. Horehound (*Mar-rubium vulgare*) is an importation of doubtful utility and exten-

sive range. In many places it covers acres of ground, crowding out the natural flora. The bees alone seem to profit by its abundance, but the honey so produced is in some places so characteristic as to taste bitter and unpalatable. *Chenopodium album* and *Atriplex patula*, known here as pig weed, are fairly abundant. The grasses foreign to the country have been mostly introduced either for lawns or agricultural purposes. These include *Poa pratensis*, *Dactylis glomerata*, *Lolium perenne*, and among the casuals may be mentioned *Poa annua*, *Lolium temulentum*, and *Grassostis poccoides*.

V. *Connection between Saxon-English and Latin.* By EDWARD J. CHINNOCK, LL.D.

The object of this paper is to show the connection between English proper, as it existed before it came into contact with Latin speakers and writers, and the Latin language. I have found between 400 and 500 words which are cognate or akin in these two languages—a fact which proves their common origin. We must remember that English belongs to the Teutonic group of the Indo-European family of languages, and that Latin belongs to another group of the same family. The ancestors of Romans and Teutons belonged to the same original stock, and spoke the same tongue. The Indo-European family of languages is divided into seven groups—1, Indian languages; 2, Hellenic; 3, Italic or Romanic; 4, Teutonic; 5, Celtic; 6, Slavonic; 7, Lettic. The Teutonic group is divided into three branches—1, Low German; 2, High German; 3, Scandinavian. The English belongs to the Low German, and the modern German belongs to the High German division. English is divided into four—1, Old English or Anglo-Saxon; 2, Modern English; 3, Provincial English; 4, Lowland Scotch. Abbreviations—O.E., Old English (Anglo-Saxon); G., German.

Ab.—Of, off; in Old English sometimes spelt *af*.

Abdo.—Do. This Latin root is only found in compound verbs, such as *condo*, *trado*, &c.

Acies.—Edge, from O.E. *ecg*; G., *ecke*.

Ad.—At.

Aes (= *ahes*).—Ore, from O.E. *ar*, *or*, *or*; G., *erz*.

Aevum.—Ever. O.E., *aefer*; aye, O.E., *a* or *awa* (ever); G., *ewig*.

Ager.—Acre and acorn; G., *acker*.

Ago.—Ache; O.E., *agan*.

Alces.—Elk (from the Scandinavian).

Alius.—Else, which—*elles*, the genitive of O.E., *el*=*alius*.

Alnus.—Alder; O.E., *alr*.

Alo.—Old; O.E., *call* or *ald*; G., *alt*.

Alter.—*Ter* is a relic of an old comparative which appears in Sanscrit as *tara*, from *tar* (cross over). It is used as the suffix to several words denoting "one of a pair," as *alter*, *uter*, *neuter*. The same comparative ending is found in our *whether*, *other*, *either*, *neither*, and in the G. *ander*.

Ambages.—*Amb* (around) is akin to G. *um* and the O.E. *ymb* or *enb* (round), a prefix still seen in *ember*-days, so called because they come round at a certain set season.

Ambo.—*Both*, from *bo*, with termination *th*.

Amburo.—*Buro* (burn), found only in *amburo*, *combuero*, is akin to our *burn*.

Anas.—O.E. *ened* (a duck), of which the masculine form was *end-rake*, contracted into our *drake*. Compare G. *ente*.

Anguis.—*Eel*; G., *aal*.

Angulus and *uncus*.—G. *angel* (a hook), and our *to angle*, from O.E. *angel* (a hook).

Anser.—Originally *hanser*, akin to G. *gans*, and our *goose*, *gaulder*; from O.E. *gos* (for *gons*) and *gandra*.

Ante.—G. *ant* in *Antwort*, and O.E. *and*, seen in our *answer*. This prefix was very common in Old English, and is akin to *end*.

Aper.—Boar, from O.E. *bar*; G., *eber*.

Apis.—Bee; G., *biene*. The prefix *a* found in *aper*, *apis*, is lost in the English and German words.

Aqua.—Island, from O.E. *igland*, where *ig* is akin to *aqua*. *Eyot*, a small island, and *Angles-ey* are also cognate with *aq*, the root of *aqua*.

Armus.—Arm, from O.E. *carm*.

Aro.—Ear (to plough), from O.E. *erian*. This word is now obsolete, but is found in our Bible and in Shakspeare.

Ascia (*acsia*).—Axe; O.E., *ax*.

Asinus.—Ass; O.E., *asse*; G., *esel*.

Astrum.—Star; O.E., *steorra*; G., *stern*.

Augeo.—Wax; O.E., *waxan*; G., *wachsen*. Also *cke*, from O.E. *ecun*.

Auris (*ausis*).—Ear; O.E., *care*; G., *ohr*.

Aurora (= *ausosa*).—East; G., *ost*.

Axis.—Axle, from O.E. *fax*; G., *axe*.

Balaena.—Whale; G., *wall-fisch*. *Balaena* is probably akin to *belua* (a big beast).

Balo.—Bleat; G., *bloeken*.

Barba.—Beard; G., *bart*.

Bini.—Twin. *Bini* is *bi* and *ni* the distributive ending, as in our *twi-n* (two at a time).

Bos.—Cow; O.E., *cu*; G., *kuh*; Gaelic, *bo*. The original root had *g*, which in the Greek and Latin words was changed into *b*.

Bracae.—Breeches, from O.E. *broc*, plural *brec*, derived from a Celtic word, from which also came the Latin.

Bustum.—Fire; O.E., *fyr*; G., *feuer*. The same root, *bus* or *bur*, is found in *comburo*, &c.

Caelum.—Hole, from O.E. *hol*, which, however, some derive from *helan* (to cover).

Calamus.—Haulm, from O.E. *hcalm*; G., *halm*.

Calvus.—Callow, from O.E. *calu*; G., *kahl*.

Calx.—Heel; O.E., *hela*.

Canis.—Hound; O.E., *hund*; G., *hund*; Gothic, *hunds*.

Cannabis.—Hemp; O.E., *henep*; G., *hanf*.

Cano.—Hen, which is the feminine of O.E. *hana* (a cock, literally a singer); G., *henne*, feminine of *hahn*.

Capio.—Have, from O.E. *habben*; haft, from O.E. *haeft*; G., *haben*, *heft*.

Caput.—Head; O.E., *heafod*; G., *haupt*.

Carpō.—Harvest; O.E., *haerfest*; G., *herbst*.

Caulis.—Kail (from the Gaelic).

Cella.—Hall; O.E., *heal*, from *helan* (hide).

Celo.—Hell, from O.E. *helan* (hide); G., *kehlen*.

Centum.—Hundred; G., *hundert*.

Cerebrum.—Horns (Scotch); G., *hirn* (brain); *gehirn* (brains).

Cervus (the horned one).—Hart, from O.E. *heorot* (horned); G., *hirsch*.

Cicō.—Hie; O.E., *higian*.

Cingo.—Hedge and haw, from O.E. *hecg* and *haga*; G., *hag*.

Circus.—Ring, from O.E. *hring*; G., *ring*.

Civis.—Home, from O.E. *ham* or *haem*; G., *heim*. *Civis* was originally *ceivis* (a resident).

Clamo.—Call; O.E., *ccallian*; Dutch, *kallen*.

Clavulus.—Halt; O.E., *healt*.

Clepo.—Shop-lifter, from O.E. *liftan* (steal); Gothic, *hlifan* (steal).

Clivus.—Lean; O.E., *hliniam*; G., *lehnen*.

Cluco.—Listen; O.E., *hlystan*.

Collis.—Hill; O.E., *hyll*.

Collum.—Hawse (hole in ship's neck); G., *hals*, and O.E., *hvals* (neck).

Hals was used in English as late as the sixteenth century, and is common in Chaucer. *Halse* (to embrace) is found as late as Spenser.

Colus.—Clue or clew; O.E., *cliwe*.

Coquo.—Bake; O.E., *bacan*; G., *backen*.

Cor (= *cord*).—Heart; O.E., *heort*; G., *herz*.

Cornu.—Horn; G., the same.

Coxa.—Hock or hough; O.E., *hoh*.

Cos (= *cots*).—Hone; O.E., *han*.

Cratis.—Hurdle; G., *huerde*; Gothic, *haurds*; and cradle, from the Celtic.

Crepo.—Raven; O.E., *hraefn*.

Crinis.—Hair; O.E., *haer*; G., *haar*.

Crudus.—Raw; O.E., *hrcaw*; G., *roh*.

- Cruor.*—Rue ; O.E., *hrcowan* ; G., *reuen*.
Cruz.—Crook ; O.E., *crok* (bend, hook).
Cuculus.—Cuckoo ; G., *kuckuk*. So *cock* seems to have been derived from the bird's cry.
Cudo.—Hew ; O.E., *heawan* ; G., *hauen*.
Culmen.—Holm, which in O.E. meant a mound ; G., *holm* (hill).
Cutter.—Shear ; O.E., *scccaran* ; G., *scheeren* ; *l* and *r* are often interchanged.
Cunctor.—Hang ; and G., *hangen*.
Cupa.—Hive ; O.E., *hyf* (cup, hive).
Curro.—Horse ; O.E., *hors* ; G., *ross*, literally “ a runner.”
Curtus.—Short ; O.E., *scceort*, from *scoren* (shear).
Custos.—Hut ; G., *hüte* ; also hide, from O.E. *hydan*.
Cutis.—Hide ; O.E., *hud* or *hyd* ; G., *haut*.
Decem.—Ten ; G., *zehn*.
Dens.—Tooth ; O.E., *toth*=*touth* ; G., *zahn*.
Deus (= *devus*).—Tuesday, from O.E. *Tiwes-daeg* (day of Tiw, “ shining one,” god of war). The root of *deus* and *dies* is *div* (shine). *Tiw* is the same word as *Jove*.
Dico.—Teach ; O.E., *taecan* ; G., *zeigen*.
Digitus.—Toe ; O.E., *ta* ; G., *zche*.
Dolo.—Deal ; O.E., *dael* ; G., *theil*.
Domo.—Tame ; O.E., *temian* ; G., *zaehmen*.
Domus.—Timber ; G., *zimmer*.
Dormio.—Doze (from the Scandinavian) ; dormose = doze-mouse.
Duco.—Tow, tug, from O.E. *teohan* ; A., *ziehen*, *zug*.
Duo.—Two ; G., *zwei*.
Edo.—Eat ; O.E., *etan* ; G., *essen*.
Egeo.—Awe ; O.E., *ege*.
Ego.—I ; O.E., *ic* ; G., *ich*.
Facio.—Do, decd ; O.E., *don*, *daed* ; G., *thun*, *that*.
Fagus.—Beech, book ; O.E., *bece*, *hoc* (which originally meant beech) ; G., *buche*.
Fallo.—Fall ; O.E., *feallan* ; G., *fallen*.
Farcio.—Burg, borough, burgh ; O.E., *burh* ; G., *burg*.
Fel.—Gall ; O.E., *gealla* ; yellow, from O.E. *gealow*.
Fero.—Bear ; O.E., *beran* ; bairn, from O.E. *bearn* ; G., *bahre* (a barrow).
Ferus.—Deer ; O.E., *deor* (wild animal) ; G., *thier*.
Ferveo.—Brew ; O.E., *breowan*.
Fiber.—Beaver ; O.E., *befer* ; G., *biber*.
Fides.—Bid, from O.E. *biddan* (pray) ; G., *bitten*.
Findo.—Bite ; O.E., *bitan* ; G., *beissen*.
Fingo.—Dough ; O.E., *dah* ; G., *teig*.
Fio, fui.—Be ; G., *bin*.
Flagro.—Bright ; O.E., *beohrt*.
Flo.—Blow ; O.E., *blawan* ; G., *blachen*.
Flos.—Blow (to bloom), from O.E. *blowan* ; bloom, from Gothic and Scandinavian ; G., *blume*.

- Fluo.*—Flow ; O.E., *flowan* ; G., *fliessen, fluth*.
- For, fari.*—Ban, banns ; O.E., *bannen* (proclaim).
- Foris.*—Door ; O.E., *duru, dor* ; G., *thor, thuer*.
- Foro.*—Bore ; O.E., *borian* ; G., *bohren*.
- Fornax, ferreo.*—Glow ; O.E., *glowan* ; G., *gluehen*.
- Fortis.*—Dare, durst ; O.E., *ic dear* ; infin., *durran*.
- Frango.*—Break ; O.E., *brecan* ; G., *brechen*.
- Frater.*—Brother ; G., *bruder*.
- Frico.*—Grind ; O.E., *grindan*.
- Frons.*—Brow ; O.E., *breah*.
- Fruor.*—Brook ; O.E., *brucan* (use) ; G., *brauchen*.
- Fugio.*—Bow ; O.E., *bugan* ; G., *beugen*.
- Fulvus.*—Fallow ; O.E., *fealo* (yellow).
- Fumus.*—Dust. In O.E. and Icelandic the word is the same ; G., *dunst*.
- Fundus.*—Bottom ; O.E., *botm* ; G., *boden*.
- Fungus.*—Swamp ; G., *schwamm*.
- Furrus.*—Brown ; O.E., *brun* ; G., *braun*.
- Galbus.*—Yellow ; O.E., *geolo* ; G., *gelb*.
- Garrio.*—Jar ; O.E., *charken* ; G., *knarren*.
- Genā.*—Chin ; O.E., *cin* ; G., *kinn*.
- Gcns.*—Queen ; O.E., *cwen* (woman).
- Genu.*—Knee ; O.E., *cneow* ; G., *knie*.
- Genus, gigno*—Kin, kind ; O.E., *cyn, cynd* ; G., *kind*.
- Gleba.*—Clod, from Scandinavian.
- Globus, glomus.*—Clew ; O.E., *cliwe* ; Dutch, *kluwen* ; and cloud ; O.E., *clud* (round mass).
- Glubo.*—Cleave ; O.E., *cleofan* ; G., *klieben*.
- Gramen.*—Grass ; O.E., *gaers* ; G., *gras*.
- Grando.*—Hail ; O.E., *hagol* ; G., *hagel*.
- Granum.*—Corn ; G., *korn*.
- Gratus.*—Yearn ; O.E., *gyrnan* ; G., *gierig*.
- Grus.*—Crane ; O.E., *cran, crano* ; G., *kranich*.
- Gustus.*—Choose ; O.E., *ceosan* ; G., *kiesen*.
- Habco.*—Have, haft. The root of *habco* is the same as that of *capio*.
- Haedus* (= *ghaedus*).—Goat ; O.E., *gat, gact* ; G., *geiss*.
- Heri* (= *hesi*). }
Hesternus. } Yester-day ; O.E., *geostra* ; G., *gestern*.
- Hio* (= *ghio*).—Yawn ; O.E., *ganan*.
- Homo* (= *ghomo*).—Groom in bride-groom, from O.E. *bryd-guma* ; G., *gam* in *braenti-gam* ; Gothic, *guma*.
- Hora.*—Year ; O.E., *gear* ; G., *jahr*.
- Hortus.*—Yard ; O.E., *geard* ; G., *garten*.
- Hostis* (= *ghostis*).—Guest ; O.E., *gaest* ; G., *gast*.
- Ibi.*—The suffix *bi* is akin to our *by*, in O.E., *bi* ; G., *bei*. The same suffix is seen in *ubi, tibi, sibi*.
- In* (Prep.)—In ; O.E. and G., *in*.
- In* (Not).—*Un* (which is also German).
- Inclutus.*—Loud is allied to *clutus* ; O.E., *htud* ; G., *laut*.

- Inter.*—Under; G., *unter*.
- Jugum.*—Yoke; O.E., *geoc*; G., *joch*.
- Juvenis.*—Young; O.E., *geong*; G., *jung*.
- Labiâ.*—Lip; O.E., *lippe*; G., *lippe*.
- Labor.*—Slip; O.E., *slipan*.
- Lacrima.*—Tear; same in O.E.; G., *zâhre*.
- Lacus.*—Loch (Gaelic), lough (Irish).
- Lassus.*—Late; O.E., *laet*; G., *lass*.
- Latus* (= *platus*).—Flat; G., *platt*.
- Lavo* and *luo.*—Lye; O.E., *leah*; G., *lauge*.
- Laxus, languo.*—Lag (from the Celtic).
- Lego.*—Lay, from O.E., *legan*; G., *legen*; and lie, from O.E. *licgan*; G., *liegen*.
- Lentus.*—Lithe (same in O.E.); G., *gelinde*.
- Levis* (= *legvis*).—Light; O.E., *liht*; G., *leicht*.
- Lex* (from *lego*).—Law, from O.E. *lagu* (that which lies).
- Libet* or *lubet.*—Love; O.E., *luf*; G., *lieben*; lief, from O.E. *leof*.
- Ligurio, lingo.*—Lick; O.E., *liccian*; G., *lecken*.
- Limus.*—Lime; O.E., *lim* (bitumen, cement); G., *leim* (gluc).
- Lingua.*—Tongue; O.E., *tunge*; G., *zunge*.
- Lis* (= *stllis*).—Strife; O.E., *stridan*; G., *streit*.
- Locus* (= *stlocus*).—Stall; O.E., *steal*.
- Longus.*—Long; O.E., *lang*; G., *lang*.
- Lucus.*—Lea; O.E., *leah*.
- Luo.*—Lose; O.E., *leosan*; G., *los*.
- Lupus.*—Wolf; O.E., *wulf*; G., *wolf*.
- Lux.*—Light; O.E., *leoht*; G., *licht*.
- Macula.*—Mole; O.E., *mal*; G., *maal*.
- Maervo.*—Mourn; O.E., *murnan*.
- Magnus.*—May; O.E., *mrgan*; might, mickle; G., *macht*.
- Mando.*—Meat; O.E., *mete*.
- Mare.*—Mere; G., *meer*.
- Margo.*—Mark and march; O.E., *mearc* (mark, border).
- Mas* (= *mans*).—Man; O.E., *mann*; G., *mann*.
- Mater.*—Mother; O.E., *modor*; G., *mutter*.
- Medius.*—Mid; G., *mitte*.
- Mel.*—Mead; O.E., *medu*.
- Mens, memini.*—Mind; O.E., *gemynd*.
- Mensis.*—Moon, month; O.E., *mona, monath*; G., *mond, monat*.
- Messis.*—Mead, math; G., *mahd, matte*.
- Metior.*—Mete; O.E., *metan*; G., *messen*.
- Meto.*—Mow; O.E., *mawan*; G., *machen*.
- Minor.*—Mince; O.E., *minsian*, from *min* (small).
- Mirror.*—Smile, which is also Danish; and provincial German *smielen*.
- Misco.*—Mix; O.E., *miscan*; G., *mischen*.
- Mollis.*—Mellow; O.E., *nearu*.
- Mola.*—Meal; O.E., *melu*; G., *mehl*.
- Mordeo.*—Smart; O.E., *smcortan*; G., *schmerzen*.

- Morior.*—Murder ; O.E., *morthor*.
- Mulgeo.*—Milk ; O.E., *meole* ; G., *milch*.
- Mus.*—Mouse ; O.E., *mus* ; G., *maus*.
- Muscus.*—Moss ; O.E., *meos* ; G., *moos*.
- Nasus.*—Nose ; O.E., *naes*, *nasu*, or *nosu* ; G., *nase*.
- Ne.*—O.E., *ne* and *na*, from which comes *not*.
- Neo.*—Needle ; O.E., *naedel* ; G., *naehen* (sew).
- Nepos.*—Nephew ; O.E., *nefa* ; G., *neffe*.
- Nervus.*—Snare ; O.E., *snear* (cord).
- Nidus* (= *nisdus*).—Nest (which is also German).
- Nix* (root, *snig*).—Snow ; O.E., *snaw* ; G., *schnee*.
- Nodus* (= *gnodus*).—Knot ; O.E., *cnotta* ; G., *knoten*.
- Nomen.*—Name ; O.E., *nama* ; G., *name* ; Gothic, *namo*.
- Nosco* (root, *gno*).—Know ; O.E., *cnawan* ; and *ken*, *can*, from O.E. *cunwan* ; G., *kennen* ; Gothic, *kann*.
- Novem.*—Nine ; O.E., *nigon* ; G., *neun*.
- Novus.*—New ; O.E., *nive* ; G., *neu*.
- Nox* (*noct*).—Night ; O.E., *niht* ; G., *nacht*.
- Nudus* (= *nuglus*).—Naked ; O.E., *nacod* ; G., *naecht*.
- Num* (*nunc*).—Now ; O.E., *nu* ; Gothic, *nu*.
- Octo.*—Eight ; O.E., *eahta* ; G., *acht*.
- Oculus.*—Eye ; O.E., *eage* ; G., *auge*.
- Olus, holus.*—Green ; O.E., *grene* ; G., *gruen*.
- Ornus.*—Roan or rowan-tree (from Norse).
- Ovis.*—Ewe ; O.E., *eown*.
- Ovum.*—Egg ; O.E., *aeg* ; G., *ei*.
- Palleo.*—Fallow ; O.E., *fealo* ; G., *fahl*.
- Pannus.*—Vane ; O.E., *fana* (flag) ; G., *fahne*.
- Pasco.*—Feed ; O.E., *fedan*.
- Pateo.*—Fathom ; O.E., *faethm* (space of the extended arms) ; G., *faden*.
- Pater.*—Father ; O.E., *faeder* ; G., *vater*.
- Paucus.*—Few ; O.E., *feaw* ; Gothic, *faws*.
- Pecus.*—Fee ; O.E., *feoh* (cattle) ; G., *vieh*.
- Pellis.*—Fell (a skin) ; O.E., *fel* or *fell* ; G., *pelz*.
- Penna* (*petna*).—Feather ; O.E., *fether* ; G., *feder*.
- Per.*—Far, fro, from, and the prefix *for* in *forswear*, &c. ; G., *ver*.
- Perforo.*—*Foro* (to pierce) is akin to our *bore* ; O.E., *borian* (to make a hole) ; G., *bohren*.
- Pes.*—Foot ; O.E., *for* ; G., *fuss*.
- Peto.*—Find ; O.E., *findan* ; G., *finden*.
- Pilus.*—Felt ; G., *filz*.
- Piscis.*—Fish ; O.E., *fisc* ; G., *fisch*.
- Pituita* (= *spituita*).—Spit ; O.E., *spittan*.
- Pix.*—Pitch ; O.E., *pic* ; G., *pech*.
- Plaga.*—Fleck (which is also German).
- Planus* (= *platnus*).—Plate, flat ; G., *platt*.
- Plecto.*—Fold ; O.E., *fealdan* ; G., *flechten*. Flax ; O.E., *fleax* ; G., *fachs* and *faltan*.

- Pleo, plenus*.—Fill, full ; G., *voll*.
Pluo.—Flow, flood, float ; O.E., *flowan, flod, flot*.
Populus (= *polpolus*).—Folk ; G., *rolk*.
Porca (a ridge between two furrows).—Furrow ; O.E., *furh* ; G., *furche*.
Porcus.—Farrow ; O.E., *fearh* (pig) ; G., *ferkel*.
Porricio.—*Ricio* is cognate with our *reach* ; O.E., *raecan* ; G., *reichen*.
Praestolor.—*Stolor* is akin to stall, still ; G., *stellen*.
Porto.—Fare, ferry ; O.E., *faran* (go) ; G., *fahren*.
Prehendo.—*Hendo* is akin to *get*, from O.E., *gitan*.
Primus (= *proimus*).—former, from O.E., *forma* (first).
Pro.—Fore, for, far ; G., *vor*.
Prurio pruina.—Freeze ; O.E., *freosan* ; G., *frieren*.
Pugnus.—Fist ; O.E., *fyst* ; G., *faust*.
Pulex.—Flea ; G., *floh*.
Pullus.—Foal, filly ; O.E., *fola* ; G., *fohlen*.
Pungo.—Fight ; O.E., *feohtan* ; G., *fechten* ; poke, from Celtic *por*.
Pupus, pupillus.—Boy ; G., *bube*.
Puter.—Foul ; O.E., *ful* ; G., *faul*.
Qualis.—Which ; O.E., *hwilc* = *hwi-lic* (why-like).
Quattuor.—Four ; O.E., *feower* ; G., *vier*.
Quercus.—Fir ; O.E., *furh* ; G., *foehre*.
Queror (= *quesor*).—Wheeze ; O.E., *hwesan*.
Qui.—Who ; O.E., *hwa* ; G., *wer*.
Quies.—While ; O.E., *hwil* (pause, time).
Quinque.—Five ; O.E., *fiƿ* = *fiƿf* ; G., *fuenf*.
Radix.—Root ; O.E., *wyrt* ; G., *wurz*.
Ratis (= *aratis*) } Oar ; O.E., *ar*.
Remus (= *eremus*) } Row ; O.E., *rowan*.
Ravus.—Gray ; O.E., *graeg* ; G., *grau*.
Rego, rectus.—Right ; O.E., *riht* ; G., *recht*.
Rigo.—Rain ; O.E., *regn* ; G., *regen*.
Rivus, ruo.—Stream ; G., *strom*.
Ruber, rufus.—Ruddy, rust, red ; O.E., *rud, rust, read* ; G., *roth*.
Rudis.—Rod, rood.
Sabulum.—Sand (which is also German and Norse).
Sal.—Salt (which is also Gothic) ; G., *salz*.
Saliva.—Slime ; O.E., *slim* ; G., *schleim*.
Salix.—Sallow ; O.E., *sealh, salig* (willow).
Salum.—Swell ; O.E., *swellan* ; G., *schwellen*.
Salvus.—Silly ; O.E., *saelig* (timely, happy, foolish) ; G., *selig*.
Sanus.—Sound ; O.E., *sund* ; G., *gesund*.
Sapio.—Sap ; O.E., *saep* ; G., *sapf*.
Satis.—Sad ; O.E., *saed* (sated) ; G., *satt*.
Scabies (from } Scab ; O.E., *scaeb*.
Scabo, to scratch) } Shave ; O.E., *scaefan* ; G., *schaben*.
Scaevus.—Skew ; G., *schief*.
Scalpo.—Sharp ; O.E., *scearp* ; G., *scharf*.
Scarabaeus.—Crab ; O.E., *crabba* ; G., *krabbe, krebs*.

- Scelus*.—Shall, from O.E., *scéal* (owe); G., *schuld*; Gothic, *skal* (owe).
Scintilla.—Shine; O.E., *scinan*; G., *scheinen*.
Scio.—Skill (from the Norse, meaning *separate*).
Scribo.—Grave; O.E., *grafan*; G., *graben*.
Scutum.—Sky; O.E., *Scua* (shade, cloud).
Seco.—Saw; O.E., *saga*; G., *saegen*.
Sedeo.—Sit; O.E., *sittan*; G., *sitzen*; Gothic, *sittan*.
Sella.—Saddle; O.E., *sadol*; G., *sattel*.
Semen.—Seed; O.E., *saed*; G. *saat*.
Semi.—O.E. prefix, *sam* (half), still seen in *sand-blind* (i.e., half blind).
Septem.—Seven; O.E., *seofon*; G., *sieben*.
Sero.—Sow; O.E. *sawan*; G., *saen*.
Serpo.—Slip; O.E., *slipan*; G., *schliefen*.
Sex.—Six; G., *sechs*.
Sic (akin to *suus*).—So; O.E., *siva*; G., *so*; Gothic, *siva*.
Sileo.—Seldom; O.E., *seldum*; G., *selten*.
Similis.—Same; G., *zusammen*; Gothic, *sama*.
Simul.—O.E., *sam* (together), used even by Spenser.
Sons, sontis.—Sin; O.E., *syn*; G., *suende*; Icelandic, *synd*.
Sordes.—Swart; O.E., *sweart*; G., *schwarz*.
Soror.—Sister; O.E., *sweostor*; G., *schwester*.
Sparus.—Spear; O.E., *sperre*; G., *speer*.
Sperno.—Spurn; O.E., *speornan* (kick against).
Spuma.—Foam; O.E., *fan*.
Spuo.—Spew; O.E., *spiwan*; G., *speien*.
Stabulum.—Stall; O.E., *steal*; G., *stall*.
Statio.—Stead; O.E., *stede* (a place); G., *stall*, *statt*.
Stella (= *sterula*).—Star; O.E., *steorra*; G., *stern*.
Sterilis.—Stark; O.E., *stearc*; G., *stark*.
Sterno.—Strew, straw, storm; G., *stroh*, *sturm*.
Stimulus (= *stigmulus*).—Stick, Sting; O.E., *stician*, *stingan*; G., *stechen*, *stecken*.
Stipes.—Staff, stiff; O.E., *staef*, *stif*.
Stipo.—Step; O.E., *steppan*; G., *stift*.
Sto.—Stand; O.E., *standen*; G., *stehen*.
Stolidus.—Still; O.E., *stille*.
Stringo.—Strong, string; O.E., *strang*, *strengre*; G., *streng*.
Sturmus.—Starling; O.E., *staer*; G., *staar*.
Suadeo.—Sweet; O.E., *sivete*; G., *suess*.
Sub.—Up; G., *auf*.
Sudo.—Sweat; O.E., *swat*; G., *schweiss*.
Sugo.—Suck; O.E., *sucan*; G., *saugen*.
Sum (= *esum*).—Am = *asm*; O.E., *com* = *esom*.
Suo.—Sew; O.E., *siwian*.
Super.—Over; O.E., *ofer*; G., *ueber*.
Sus.—Sow, swine; O.E., *sugu* or *su*, *swin* (a pig); G., *sau*.
Susarro.—Swarm; O.E., *swearm* (that which hums); G., *schwarm*.
Tabes.—Thaw; O.E., *thawan*; G., *thauen*.

Tam (root *ta*, this).—The, that; G., *der*, *dass*. The same root is found in *is-te*, *is-ta*, *is-tud*.

Tango.—Take (from the Norse); Gothic, *tekan* (touch).

Taurus (= *Staurus*).—Steer; O.E., *steor*; G., *stier*; Gothic, *stiur*.

Tectus.—Tight; G., *dicht*; literally, "covered in."

Tego.—Deck (from Dutch), thatch; O.E., *decan* (to cover), *theccan*; G., *decken*, *dach*.

Tendo, *tenuis*.—Thin; O.E., *thynne*; G., *dehnen*, *duenn*.

Tenebrae.—Dim (same in O.E.); G., *dämmerig*.

Terminus.—Thrum (from Scandinavian); G., *trumm*.

Tero.—Throe; O.E., *threaw*.

Tollo.—Thole; O.E., *tholian*; G., *dulden*; Gothic, *thula*.

Tono.—Thunder; O.E., *thunian*; G., *donner*.

Torquco.—Throw; O.E., *thrawan* (turn); G., *drehen*.

Torreo.—Thirst; O.E., *thyrst*, from *thyr* (dry); G., *durst*.

Trans.—Through; O.E., *thurh*; G., *durch*; Gothic, *thairh*.

Tres.—Three; O.E., *thry*; G., *drei*; Gothic, *threis*.

Trudo.—Threat; O.E., *threotan*; G., *verdriessen*.

Tu.—Thou; O.E., *thu*; G., *du*; Gaelic and Persian, *tu*; Greck, *su* or *tu*.

Tun.—Then, than; O.E., *thonne*; G., *denn*, *dann*.

Turdus.—Thrush; O.E., *thrysc*; G., *drossel*.

Uber.—Udder; O.E., *uder*; G., *euter*.

Ulmus.—Elm; G., *ulme*.

Ulna.—Ell, elbow; O.E., *eln*, *el-boga*; G., *ellen-bogen*.

Uhu.—Howl, owl; O.E., *ule*; G., *eule*.

Umbilicus } Navel; O.E., *nafela*; G., *abel*.
 } Nave (of a wheel); O.E., *nafu*.

Unda.—Water; O.E., *waeter*; G., *wasser*; Dutch, *water*.

Unguis.—Nail; O.E., *naegel*; G., *nagel*.

Unus.—One; O.E., *an*; G., *ein*; Gothic, *ains*.

Urgeo.—Wring; O.E., *wringan* (to press); wreak; O.E., *wrecan*; irk (from the Scandinavian).

Urina.—O.E., *wer* (sea); G., *harn*.

Uter (= *euter*).—Whether; O.E., *hwæther*; Gothic, *hwathar* (which of the two).

Ualo.—Go; O.E., *gan*; G., *gehen*; Gothic, *gajjan*. Also, wade; O.E., *wadan*.

Uae.—Woe; O.E., *wa* or *wae*; G., *weh*.

Ualco.—Wield; O.E., *waldan*; G., *waltn*.

Uas.—Wed (literally, to pledge, bargain); O.E., *weldian*, from *wed* (a pledge); G., *welle*.

Vastus.—Waste; O.E., *weste*.

Veho.—Weigh, waggon; O.E., *wegan* (carry), *waegen* (cart); G. *wegen*; Gothic, *wegs* (movement).

Vellus.—Wool; O.E., *wull*; G., *wolle*; Gothic, *vulla*.

Venoror.—Win; O.E., *winnan*; G., *gewinnen*.

Venio (= *gvenio*).—Come; O.E., *cuman*; G., *kommen*.

- Ventus*.—Womb ; O.E., *wamb* ; G., *wampe*, *wanst*.
Ventus.—Wind (English and German) ; Gothic, *vinds* ; weather ; O.E., *weder* ; G., *wetter*.
Verbum.—Word (same in O.E.) ; G., *wort* ; Gothic, *vaurd*.
Vereor.—Ware, ward ; O.E., *waer*, *waerd* ; G., *warten* ; Gothic, *vars*.
Vermis.—Worm ; O.E., *wyrm* ; G., *wurm* ; Gothic, *vaurms*.
Verna (= *cesna*).—O.E., *wist* (food).
Verto.—Our suffix *ward* ; O.E., *weard* (towards) ; G., *wärts* ; worth (to become), from O.E., *weortan* ; G., *werden*.
Vespa.—Wasp ; O.E., *waesp* or *waeps* ; G., *wespe*.
Vesper.—West (English and German), from *vas* (to dwell) ; Sanscrit, *vasta* (house). The west was supposed to be the sun's dwelling place at night.
Veterina.—Wether (a yearling) ; G., *widder*.
Via (= *vegia*).—Way ; O.E., *weg* ; G., *weg* ; Gothic, *veys*.
Vibro.—Waive (from Scandinavian).
Vicis.—Weak ; O.E., *wician* ; G., *weichen*, *wechsel*.
Vicus.—Wich, wick, as in Greenwich, Alnwick ; O.E., *wic* (dwelling).
Video.—Wit ; O.E., *witan* (know) ; G., *wissen*.
Viduus.—Widow ; O.E., *widwe*, *widuwe* ; G., *wittwe* ; Gothic, *viduvo*.
Vieo, *vitis*.—Withe ; O.E., *withig* (willow) ; G., *weide*.
Vigeo.—Wake, watch ; O.E., *wacan* ; G., *wachen*.
Vincio.—To wind ; O.E., *windan* ; G., *winden*.
Vinum.—Wine ; O.E., *win* ; G., *wein* (these English and German words were derived from the Latin through the Gothic).
Vir.—O.E., *wer* (man) ; G., *herr* ; Gothic, *vair*. The Anglo-Saxons called the devil *wer-wolf* (man-wolf).
Vivo (= *givo*).—Quick ; O.E., *cwic* (living, active) ; Gothic, *quivs*.
Volo.—Will ; O.E., *willan* ; G., *wollen*.
Volvo.—Walk ; O.E., *wealcan* ; G., *wälzen* ; wallow—O.E., *welwian*.

1st May, 1891.

REV. WILLIAM ANDSON in the Chair.

New Members.—Miss Babington, Meadowbank, and Mr Harold Masterton.

Donations.—The Proceedings of the Society of Antiquaries of Scotland, 1889-90 ; the Smithsonian Report, 1888 ; the Report of the United States National Museum, 1889-90.

Exhibit.—The Secretary (Dr E. J. Chinnock) exhibited a *fac simile* of part of the newly-discovered papyrus containing the lost work of Aristotle on the "Constitution of Athens," and read a paper descriptive of the papyrus.

COMMUNICATIONS.

I. *Some Old Note-takers and their Notes.* By Mr PETER GRAY.

In his paper Mr Gray succinctly analysed the contents of three booklets, describing respectively the countries and peoples of England, Holland, and Scotland. The book is ascribed to James Howell, the author of the celebrated "Letters" (1596-1666).

II. *Holywood Abbey.* By GEORGE F. BLACK, Ph.D.

The date of the foundation of the Abbey of Holywood is uncertain, but it seems to have been before the year 1180. Previous to this, however, there seems to have been a cell occupied by a monk named Congall, hence the name Dercongall, meaning "the oak wood of Congall." Congall, or S. Congall, is commemorated in the calendar of Adam King, published in Paris in 1588, under May 12th:—"S. Congall, abot of haliwode and conf. in scotland vnder King Malcome 2. 1 13." In the Martyrology of Aberdeen, quoted in Forbes' *Kal. Scot. Sts.*, p. 130:—"Vj Idus Maij. In Scotia Sancti Congalli abbotis apud monasterium de Drumcongall cuius merita longe lateque diffusa miraculis non desunt clarere impolluta mente calcanit et immerito qui presentis vite infomiam et immundicie calumniam tanquam Christi pauper paupertatis et paciencie posterum prebebat exemplum." In Brockie's MS. (p. 8488) it is stated that in an ancient missal belonging to Father Thomas Primrose, there was inserted with a pen a collect of or to "S. Congal, Abbate Sacri Bosci."—Gordon, *Monasticon* p. 318. See also Dempster, *Hist. Ecc. Gent. Scot.* i. 158-59. The Abbey was also known by the name Dercongall, especially in Papal Bulls, and it was also called St. Bois, Sacro Bosco Nemus Sacrum, and Monasterium sacris nemoris, "Monastery of the sacred grove." A large part of the grove remained in the time of Charles I. (Description of Nithsdale in *Bleau's Atlas*, 55.) Many roots of ancient oak trées were dug up by the Rev. Dr Bryce (Johnston's *Statistical Account*, i., p. 18). A drawing of the stone circle at Holywood is given by Grose in his *Antiquities*, vol. i., p. 169. The foundation of the Abbey of Holywood could not have been much earlier than 1180, as the monks belonged to the Premonstratensian order, which was

established about 1120. The Premonstratensian or Norbertine order was founded by S. Norbert about the year 1120, in the diocese of Laon, France. A spot was pointed out to S. Norbert in a vision, and he termed the place *Pre montre* or *Pratum mon-stratum*, because the place was "divina revelacione praemon-stratum." The order was a mixture of the monastic and canonical life, and followed chiefly the rule of S. Augustine. The order was also sometimes called *candidus ordo*, because their garb was entirely white. It was confirmed by Pope Honorius II. and Innocent III. After the death of their founder the monks of Premontre published that he had received his rule, curiously bound in gold, from the hand of St. Augustine himself, who appeared to Norbert one night, and said thus to him—"Here is the rule which I have written, and if thy Brethren do observe it, they, like my children, need to fear nothing at all in the day of Judgment." The order spread itself into Syria, Normandy, Flanders, Spain, Britain, and elsewhere. According to Dugdale (*Monasticon*, ii., p. 1057), the Abbey was founded by John, Lord of Kirkconnell, of the Maxwell family. According to another account it was founded by Devorgilla, wife of John Baliol, Lord of Barnard, as a cell to Soul's Seat. The former seems to me to be the more probable, although it must be confessed all is uncertainty. In 1235, Affrica, daughter of Edgar, mentions the lands of Dunscore as being near the lands of the monks of Dercongal and the King's road, which led from Dercongal to Glencairn (*Lib. Cart. Melros* 103). In the same year, Odo or Otho, who had been abbot of Dercongal, was elected Bishop of Candida Casa by the monks of Whithorn; but he was refused consecration, and his opponent, who had been elected by the clergy of Galloway, was preferred (*ibid*). In 1257, William, Bishop of Glasgow, decided a controversy between the monks of Melrose and the monks of Dercongal regarding the church and titles of Dunscore (*ibid*) 107.

The abbot of Dercongal sat in the great Parliament at Brigham in March, 1290 (Rymer, *Foed.*, ii., 471, where the name Dercongal is blundered into Darwongville). Dungal, the "abbot de Sacrobosco" (Sacred Bush), with his monks, swore fealty to Edward I. at Berwick in August, 1296 (Prynne, *Hist. Coll.*, iii., p. 653). Prynne gives the name as Saint Boyse. In return King Edward immediately issued a writ to the Sheriff of Dumfriesshire ordering

him to restore the property of "Dungal abbas de sacro nemore" (Rymer, ii., p. 72). In May, 1365, David II. granted a protection and certain privileges to the abbot and convent "de sacro nemore" (*Regis. Mag. Sig.* 128). In the reign of Robert I., his brother, Lord of Galloway, founded at the Abbey of Holywood an hospital and a chapel, which he endowed with some lands in Galloway. This hospital having been ruined during the war of succession was restored in 1372 by Archibald Douglas, Lord of Galloway, who again endowed it with the lands of Crossmichael and Troqueer, in Galloway. This second endowment was sanctioned by Walter, Bishop of Glasgow, and confirmed by Robert II. on the 2d June, 1372 (*Reg. Mag. Sig.*, ii., 56).

The Abbey stood within the present churchyard till 1779, when its remains were pulled down and appropriated to the building of the present church. An engraving of the Abbey is given in Cardonnel's *Antiquities of Scotland*. Two bells originally belonging to the Abbey are still in use. One bears an inscription partly illegible, which is generally understood to mean that the bell was consecrated by an abbot, John Wrich, in the year 1154. I am inclined to think there is some error here. The copy of the inscription given in Riddell's MS. (vol. vii., p. 211) seems to read—I. WRICH ABBAS SACR. NME. FIERI FECIT AD. Q. . . . VIGEN. Query—Can the date be 1520? Riddell says—"The Chartulary of the Abbey [of Holywood] was carried by some of the monks to France, and I am told is either to be seen in the Scott's Colledge at Paris or at the Colledge of Dowey in France" (MS. vol. vii., p. 209). Could we refer to this cartulary we should in all probability have little difficulty in determining the date of the bell.

The monks of Holywood possessed many lands in Nithsdale and East Galloway, and had jurisdiction over the whole. The powerful family of Maxwell acquired the office of baillic to the abbot, whom they protected, and they obtained the six-merk lands of Baltersan, with the three-merk lands of Glenslan, as a fee for executing this office, which continued hereditary till the abolition of such jurisdictions in 1748 (*Inquisit Speciales*, 25, 102, 266, 346, 380). In 1544 the rental of the monastery amounted to £700 Scots money, 19 chalders, 14 bolls, and 3 firlots of meal, 9 bolls and 3 firlots of bear, and one chalders of malt. By the plunder of the Reformation it was reduced to £425, and still more

to £395 18s 8d Scot (Keith's *Hist.*, *app.*, p. 185). What remained of the property of this monastery after much waste was vested in the King by the General Annexation Act in 1587. In 1617 an Act of Parliament was passed dissolving the said annexation as to the whole temporal property of the Abbey, and the spiritual property of the same, consisting of their parish churches of Holywood, Dunscore, Penpont, Tynron, and Kirkconnel, parsonages and vicarages, with their tithes and revenues, in order that the King might grant the whole to John Murray, of Lochmaben, and his heirs, and might erect the same into a free barony, to be called the barony of Holywood, for the yearly payment of £20 Scots, in name of *blench ferm* (*Acts Parl. Scot.* iv., 575). Murray accordingly obtained a charter of the whole on the 9th of April, 1618, and it was ratified in Parliament on the 4th August, 1621 (*Ibid.* iv., 665). Murray, who had been about the King from his youth, and was one of the grooms of the bed-chamber, acquired from the King before this the barony of Lochmaben and other property in Dumfriesshire.

Thomas Campbell, the last abbot of Holywood, was prosecuted by the Regent Murray for assisting Queen Mary after her escape from Lochleven, and he was forfeited on the 19th August, 1568 (*Acts Parl.*, iii., 54). A charter of grants of lands by this abbot Thomas to John Charteris, in Rydingwood, dated 7th June, 1548, is in the National Museum of Antiquities. The seal attached to this charter is similar to one figured by Laing (*Scottish Seals*, ii., p. 202, pl. xv., 2). It is circular, in the centre a bird sitting on a tree; in the lower part are two estoiles, legend—*s COE ABBIS ET CONVENTI SAC NEMORIS*—"Common Seal of the Abbey and Convent of Sacra Nemoris."

III. *Meteorological Notes on the past Winter.*

By Mr PATRICK DUDGEON.

The exceptional characteristics connected with the winter of 1890-91 deserve more than a passing notice, and the few subjoined notes may perhaps be thought worth placing on the records of the Society for reference at any subsequent period:—

Much attention has been given of late years to the subject of meteorology, and although in the present state of the science it appears impossible to deduce anything like true conclusions as to

what may probably occur in the future regarding "weather," still it may be hoped that from an increased number of meteorological stations, and more careful and extended observations, that "weather forecasts" may assume a more important aspect than is the case at present in the infancy of this science. What has already been accomplished in this direction by the Meteorological Office has undoubtedly been of much service to the country, and the warning notices of approaching storms have been the means of saving many lives, although the "forecasts," generally speaking, can only be relied on for a period of 24, or at the most 48, hours in advance, and then not always with certainty. About 75 to 80 per cent. of the "forecasts" issued by the Meteorological Office prove to be correct, but sudden changes of weather and storms, arising, probably, from some local atmospheric disturbance, still elude the most careful observers. One of the most marked features of the past winter has been the difference in temperature between the South and North of Great Britain, quite reversing the usual conditions. The cold experienced in the South of England has been compared, not without reason, to the memorable winter of 1814, when the Thames was quite frozen over above Blackfriars' Bridge, a fair was held on the frozen river, booths erected for dancing, &c., printing presses set up, and a sheep was roasted on the ice; and had it not been for the extensive embankments, erected since that time, contracting the channel of the river, and thereby creating a stronger current, it is believed the same things might have taken place during the past winter; as it was, the river was frozen over at Hampton Court, and for some distance below, and skating was indulged in for miles on the frozen surface. Large masses of floating ice accumulated between the bridges for a time, quite putting a stop to navigation. The ice on the ponds in the different parks was from 7 to 10 inches in thickness. The duration of this frost continued for a considerably longer period than in 1814. The days on which the mean temperature was below 32 degrees during the late frost were 33; in 1814, 26 days. In the North of England and Scotland, generally speaking, little more than an ordinary winter was experienced, and in the extreme North of Scotland the winter months were rather above the average temperature. The duration of the frost may be taken as lasting from the 13th December, 1890, to 22nd January,

1891, inclusive, and though varying a little in some districts, the period may be taken for the sake of comparison. In the southern parts of the kingdom the frost was almost continuous during the period; in the north many intervals of milder weather were experienced. Coming northwards we find a steady and progressive rise in temperature taking place, and, on the other hand, as we go southwards, an increasing number of days in which the minimum temperature was below 32 degrees, and also in the absolute minimum, as the following table clearly shows :—

	Average Minimum for the period.	Absolute Minimum.	Nights below 32°.
London	24°.2	14°	40
York	25°.4	10°	23
Cargen.....	27°.9	17°	31
Leith.....	30°.3	25°	25
Stornoway.....	34°.1	25°	13
Shetland	} 35°.5	27°	8
Sumburgh Head			

Many instances of this progressive difference in temperature between the south and north of the country might be given. One may be adduced. On the 12th January the mean temperature for the previous 24 hours was in—

London	...	...	...	...	...	21°.5
York	...	...	...	...	...	32°.5
Cargen	...	...	...	...	...	45°.2
Leith	...	...	...	...	...	44°.8
Stornoway	...	...	...	...	...	50°
Sumburgh Head	...	...	...	...	...	46°.5

Great damage has been done in many places by the intense cold. One instance of this is the destruction amongst the oyster beds at Whitstable. The sea was covered with ice, and the damage done is estimated at from £15,000 to £20,000.

Another remarkable feature of the late winter was the small rainfall in February throughout the whole country. No such dry February for the whole of Great Britain has ever been recorded, and it may be doubted if we have ever had in any month during the present century so small a rainfall for the whole kingdom. The rainfall in the south, generally speaking, has been less than in the north. A map is given in the April number of the *Meteorological Magazine*, which shows that the average rainfall of the month, between a line drawn from Peter head through Glasgow, and another from the mouth of the Tees

to Milford Haven, is—1 inch and + 0·10 inch. Southwards of the last line the average rainfall of the district is—0·10 inch; north of the first line the average rainfall is + 1 inch. There are a few exceptional stations in Wales, Cumberland, and the west coast of Scotland where the rainfall is + 2 inches, but at these the fall has been much below the average—*e.g.*, at Seathwaite, Borrowdale, where the average rainfall for February is 12·64 inches, the falling off was no less than 10·04 inches. In a table given in the *Meteorological Magazine* for March the observations taken from 770 stations in the south and midland counties of England show that at 129 of these stations the fall was less than — 0·10 inch, and at 48 (15 of which were in Devonshire) no rain was recorded. Mention must be made of the exceptionally high barometric pressure which prevailed all over the country during February. The mean pressure for the month at Cargen was 30·413 inches, corrected for sea level. The nearest to this abnormally high pressure recorded at this station during 31 years was in November, 1867, when the mean height of the barometer for the month was 30·269 (corrected) inches. At Pembroke the mean for February was 30·444 inches.

The snowstorm of March, which principally affected the south-west of England and the north of France, was one of the most severe which has occurred for many years, and which was most severely felt in Devonshire and Cornwall, where much damage was done. Many trains were blocked in the south of England, and in Devonshire and Cornwall all communication was cut off between different centres for three or four days. Amongst other mishaps the "Zulu" express from London to Plymouth was blocked by snowdrifts at Cambourne for three days. Snowdrifts from 10 to 30 feet deep were reported from many places. A strong gale was experienced during the time of the snowfall, and many shipwrecks occurred on the Cornish and Devonshire coasts. The storm commenced on the 9th, and lasted, with an interval of no snow on the 11th, till the 13th. "The area visited seems to have been a belt of about 120 miles wide, extending from about Cheltenham on the north to Jersey on the South, or say from Colchester on the north to Dieppe on the south, and reaching from the south of Ireland eastwards to Holland."—*Meteorological Magazine* for April. In this part of the country an unusually heavy fall of snow took place on the night of the

7th-8th. The fall here was confined to a comparatively limited area, and was most felt in the valley of the Cairn, 18 inches having been measured at Maxwelton House. At Cargen it measured $6\frac{1}{2}$ inches, which with the exception of the fall on 29th January, 1865, is the heaviest recorded in one day at this station.

(The meteorological station at Cargen may be taken as fairly representing the average of the south-west district of Scotland. Observations have been made at it uninterruptedly for 31 years.)

IV. *Dumfries Academy in 1801-3.* By EDWARD J.

CHINNOCK, LL.D.

The High School of Dumfries dates back to the pre-Reformation times. The first record in existence relating to it is dated 1481, in which mention is made of "Master John Turnbull, rector of the school of Dumfries." Previous to 1803 there were four separate schools—the Grammar School, the Arithmetic and Mathematical, the English, and the Writing Schools. In that year these four schools were lodged under one roof, but there was a lapse of eighty years before they were really amalgamated and formed into one school, with a common curriculum and under one management.

In perusing the *Dumfries Weekly Journal* for 1801, I came across the following advertisement—"Sept. 8.—The Grammar School of the town of Dumfries having become vacant by the resignation of Mr Gray, the Rector, all persons who wish to become candidates for that office are desired to signify the same to any of the Magistrates, by a letter, accompanied by proper certificates of their moral characters. The Candidates are to undergo a comparative trial before two of the Professors at Edinburgh—the time and place will be afterwards advertised." The following advertisement appeared on September 22—"Vacancy in the High School of Dumfries. The office of Rector of the Grammar School of Dumfries having become vacant by the resignation of Mr Gray, appointed one of the masters of the High School at Edinburgh, the Magistrates and Council have determined that such Candidates as wish to offer themselves for the above office shall undergo a comparative examination before Professors Hill and Dalzell, of Edinburgh, upon Tuesday, the 13th day of October, 1801, in the Royal Exchange Coffee-house,

at 12 o'clock noon, where the respective candidates are desired to attend." No record appears of the name of the successful candidate, but subsequent notices show that the fortunate man was Mr Carson, subsequently Dr Aglionby Ross Carson, Rector of Royal High School of Edinburgh, one of the most famous teachers of his time. The next advertisement relating to this matter appeared on March 16, 1802—"Dumfries Academy. Notice is hereby given to the Subscribers that Contracts have been entered into and arrangements made for building and finishing the New Academy of Dumfries; and as it is necessary that the outstanding Subscriptions be immediately collected, in order to enable the Committee of Management to fulfil their part of the contracts, such of the subscribers to this laudable institution as have not yet paid in their subscriptions are requested to order payment to the undersigned secretary (who is authorised to receive and discharge the same), betwixt this and the first day of April, 1802, and thereby supersede the adoption of measures to obtain payment. By order of the Committee.—Rob. Locke, secretary."

Same date.—"Grammar School, Dumfries.—Mr Carson will begin a class for the principles of the Latin language on Monday, the 5th April. The hours of meeting are ten and two."

April 6.—"English Grammar.—John Hanning will begin a class on Monday next. Those who are prevented by other avocations from attending at school hours, and who wish to learn the language grammatically, may be accommodated at 8 o'clock of the morning or 4 in the afternoon, at which hours J. H., for their convenience, means to teach a class."

May 5.—"Dumfries Mathematical School.—On Thursday, the 13th instant, Mr White opens his geographical and mathematical classes at twelve o'clock."

May 5.—"New Academy.—On Tuesday last the foundation stone of the New Academy was laid here with great solemnity in presence of a vast concourse of people. At two o'clock the Magistrates and Committee for managing the affairs of the schools met near the Council Chamber, and from thence walked in solemn procession to the site of the new building. The magistrates, preceded by the town officers, advanced first; the Committee and a number of other gentlemen and clergy followed next; and behind them the masters and their several classes

proceeded in regular order. When they had reached the ground, the foundation stone was laid by David Staig, Esq., who, having thrice struck the stone according to the rules of Masonry, addressed the gentlemen and clergy present in an appropriate and excellent speech, and concluded with saying—‘May the great Architect of the Universe prosper the undertaking. Under His auspices may it be soon and happily completed. May it ever enjoy His protection, and remain a seminary of useful learning to our latest posterity.’ This being finished, the Rev. Alex. Scot, one of the ministers of Dumfries, pronounced the following address (with which we have been favoured) to the magistrates and Committee—‘Gentlemen, amidst the improvements in all the useful arts for which our country is distinguished, it is pleasant to observe that the interests of literature and science have not been neglected; and it is with peculiar satisfaction, we reflect, that in no part of the kingdom has more attention been paid to this great object than in the town and neighbourhood of Dumfries. This place has long been esteemed a situation well calculated, both from its healthfulness and the abilities of the teachers, for the instruction of youth, and it has ever been the care of the magistrates to select masters eminently qualified to discharge the duties of their office. With what wisdom and impartiality the present masters have been chosen to preside in their respective departments, their well-earned reputation affords the most convincing proof. From the confidence of the public in their abilities and diligence the schools of Dumfries have become a seminary for the instruction of youth, not only to the town and country around it, but have been resorted to for education from every corner of the kingdom, and even from our most distant settlements abroad. One thing, however, was still a matter of regret. The apartments allotted for the accommodation of masters and scholars were so exceedingly disproportionate to the high character of the schools, and so much inferior to the improved style of other buildings, both public and private, that a strong wish has long been expressed to have an edifice more suitable and convenient erected. The work in which we are now engaged affords us the agreeable prospect that this wish will soon be accomplished; and we consider it as a most auspicious circumstance that the foundation stone of this new academy is laid at a time when the olive succeeds to the laurel, and bountiful

Providence diffuses amongst us the blessing of plenty. And it may be observed, as suggesting another agreeable reflection, that this seminary reckons among the contributors to the present undertaking many of her own sons, into whose opening minds she instilled the principles of useful knowledge, and whose breasts she inspired with the love of virtue, and all those liberal and manly sentiments which prepared them for filling their various situations in society with such credit as distinguishes them among their contemporaries, and reflects honour on the place which gave them birth. The masters, we doubt not, will ever esteem it their first duty and their greatest pride to support the dignity of their profession ; and we indulge the pleasing hope that their scholars now standing around us, and thousands yet unborn, admiring the virtues and talents of those who have gone before them, will be stimulated to follow their example, and even, if possible, to excel them in every noble and worthy pursuit. I congratulate you, gentlemen—I congratulate the public at large—on the business of this day, and it is my prayer to the Supreme Ruler of the universe, whose blessing we should implore on all our designs, that he would prosper the present undertaking, and enable us to bring it to a happy conclusion ; that He would bless those patriotic and public-spirited men by whose influence and generous efforts it has been promoted, and continue to watch over the interests of our Academy, the object of whose institution it is

To rear the tender thought ;
 To teach the young idea how to shoot ;
 To pour the fresh instruction o'er the mind ;
 To breathe the enlivening spirit, and to fix
 The generous purpose in the glowing breast.'

After this address was finished a general huzza was thrice repeated, and the procession returned in the same order as it came. The town bells rang during the procession, and the Dumfries Volunteers kept off the crowd. The greatest regularity was observed, and no accident happened during the whole business of the day. The gentlemen present retired to the George Inn, where they dined, and spent the afternoon with the greatest conviviality and good humour. The following is a copy of the inscription on the plate of brass deposited on the foundation stone—

Aedificii hujusce,
 Utilitati publicæ sacri
 Quo commodius erudiatnr,
 Juventus ;
 Pecunia iu sumptum
 E privatorum liberalitate
 Erogata ;
 Senatus Populusque Dumfriensis,
 Lectique e collatorum numero
 Lapid. prim. ponend.
 Curarunt
 Ant die quint. Kal. Maii
 Aer. Christ, 1802.
 Q. D. B."

August 3, 1802.—Dumfries, 23rd July, 1802.—“The Grammar School here was this day examined by a Committee of the Presbytery of Dumfries, when the scholars in the different classes acquitted themselves in such a manner as gave great satisfaction to the examiners and all the other gentlemen present ; and bore ample testimony to the diligence and ability of Mr Carson, the Rector. Every friend of youth and literature was happy to find that the School of Dumfries continues to maintain its high reputation, and that a most important duty is ably and faithfully discharged.—George Duncan, Wm. Burnside, D.D., Alex. Scott, Wm. M'Morine, Wm. Thorburn, John Wightman.”

August 24.—“Grammar School, Dumfries.—The different classes will meet on Monday first, being the 30th current, at the usual summer hours. A class for the elements of Greek will begin on Monday, the 13th of September. N.B.—Mr Carson can accommodate a few borders, to whom he will pay the most particular personal attention in private.”

October 19.—“English Grammar.—John Hanning will open a class on Monday next at 12 o'clock noon. Ladies, gentlemen, and heads of families favouring him with their commands may depend upon his fidelity.”

January 11, 1803.—“Dumfries New Academy.—As a considerable number of subscriptions to this institution still remain unpaid, and as the Committee of Management have given instructions for immediately collecting the same, the subscribers are again respectfully solicited to pay their outstanding contributions without further delay.—Rob. Locke, Sec.”

March 15, 1803.—“Grammar School, Dumfries.—A class for the rudiments of the Latin tongue will begin upon Monday, the 10th of April. Hours of meeting, ten and two o'clock. N.B.—Mr Carson can accommodate a few boarders.”

April 19.—“Dumfries Mathematical School.—T. White (by whom youths are boarded) opens his mathematical and geographical classes on the second Monday of May next, at twelve o'clock noon.”

July 26.—“Dumfries, 22nd July, 1803. — The Grammar School here was examined in presence of the Magistrates and other respectable gentlemen of the town and neighbourhood, by a Committee of the Presbytery of Dumfries, when the boys in the different classes exhibited such specimens of improvement as did great credit to themselves, and bore ample testimony to the diligence and ability of their teacher. They merited and received the most cordial approbation of the examiners and all present on the occasion. After a suitable address from the Provost and Moderator of the Committee, the happy youths were permitted to enjoy their usual vacation. Every friend to the community will rejoice to think that the most important of its interests—the education of its youth—is entrusted to able and faithful hands; and that not only the Grammar School, but the other schools of Dumfries also continue to preserve that high character which, it is well known, they have long maintained.—Gabriel Richardson, provost; Wm. Wright, Wm. Burnside, Alex. Scott, Wm. M'Morine, Wm. Thorburn, John Wightman, ministers.

August 30.—“Grammar School, Dumfries. — The different classes will meet on Monday, the 5th of September, in the *New Academy* at the usual summer hours. A class for the elements of Greek will begin on Monday, the 19th of September. N.B.—Mr Carson accommodates boarders.”

October 4.—“English Grammar.—John Hanning, English teacher, will open a class in English Grammar on Monday next. Those who cannot attend his public hours of teaching may be accommodated in his schoolroom at twelve or four o'clock. *A young man having a competent knowledge of the English language, wishing for further improvement, and well recommended, by applying to Mr Hanning will hear of a comfortable situation.”

FIELD MEETINGS.

Saturday, 6th June.

A party of 45 proceeded to Graitney, Canonbie, and up Eskdale, under the escort of Mr William Doughtie, forester to the Duke of Buccleuch. The beautiful Penton Linns were visited, and then the party proceeded to Gilnockie, or Johnnie Armstrong's Tower. A visit was paid to the beautiful grounds of Langholm Lodge, and then the party drove back to the railway at Gretna Green.

New Members.—Mrs Gillespie and Mrs M^cTier.

Saturday, 11th July.

A garden party was given by Mr Rimmer, the President of the Society, at Dalawoodie, at which 25 members were present.

New Members.—Miss Batty and Dr J. M. Ross.

Saturday, 6th August.

A party of 20 drove to Closeburn Manse, where they became the guests of the Rev. Dr Ramsay. A visit was paid to Closeburn Castle, which was exhibited by T. M. Brown, the factor of the estate. All that remains of the old fortress is the keep, which is a massive square structure of considerable dimensions. There is no data by which to fix the period of its erection, but it must be of great antiquity. It is in a good state of preservation, which it owes no doubt to the fact that it has always been inhabited, and although it has had constantly to adapt itself to the requirements of the times, it still possesses sufficient of its ancient characteristics to show what manner of building it must have been in the earlier part of its history. The thickness of the walls is phenomenal, being four yards all but an inch on the ground floor, eight feet and a half on the first floor, and even at

the top it is not less than six feet. The construction is of solid masonry throughout, not a facing of large stones filled with rubble between. It is said that when the present windows were formed to make the place suitable for a dwelling-house, it was necessary to use blasting powder to enlarge the openings. On the higher stories several of the old windows are still left, with stone seats in the recesses. One of the windows in the top flat is fitted with an old-fashioned frame, and on one of the panes a former inhabitant of the Castle has given vent to his feelings in the expression "Charming Grizzie Stewart, J. K." The initials are supposed to be those of Sir James Kirkpatrick, who sold the estate in 1783. But "Charming Grizzie" is not the only lady whose praises have thus been handed down to posterity, for on the same window we read, "O, Fine Christy Kirkpatrick," and "Miss Jeanie Kirkpatrick is a charming creature, 1762." A peculiarity about the building is that three of the flats are arched, while seldom if ever more than two are met with in such structures. The old entrance is still in use, but a covered-in stair leads to it. The low doorway still has its trellised iron gate, and also a wooden door with an old-fashioned "sneck." A circle of noble trees now occupy the site of the wall, and the ground which once formed the bed of the loch is clothed with luxuriant pasture. A crack can be traced from the top to the bottom of the Castle, which is supposed to have been caused by a subsidence when the loch was drained in 1859. An old boat which was then found embedded in the moss is now in the museum at Edinburgh.

Mr Brown very much laments the absence of a haunted chamber to show the many visitors who turn aside to have a look at the old place, or a ghost story to entertain them with. The family of Kirkpatrick, however, was too long associated with the place to be free of the superstitions which attached themselves to so many old families. It is said that when a death was to take place in the family a swan appeared on the loch which surrounded the Castle. The last time that this evil omen was seen is said to have been on the day when Sir Thomas, the first baronet, was leading his third bride to the altar. His son Roger went out and saw the ominous sign, and on returning to the house overwhelmed with melancholy his father railed on him for his desponding appearance, alleging the stepmother to be the cause

of his sadness. The young man, saith the story, only answered, "Perhaps ere long you may also be sorrowful," and expired suddenly that very night.

The party were again taken in hand by Dr Ramsay, who led them to the churchyard, the principal object of interest there being the ruins of the old church. The only part of the sacred edifice now standing is the belfry gable, with a yard or two of wall on each side pierced with windows. A church of some kind existed in the twelfth century, but how much earlier is not known. The stones forming the present remaining gable suggest three different epochs. Forming part of the inside of the wall are weather worn stones which were evidently part of some previous building—perhaps an earlier church; and the portion which was added to the height in order to admit the erection of galleries in 1741 is still traceable. With the aid of a ladder, Mr Barbour, architect, clambered to the belfry to inspect the bell. A lengthy inscription encircles it, which he was unable to read, owing to the difficulty in getting round the belfry, but he was able to decipher the date 1606 quite distinctly.

New Members.—Mr T. M. Brown, Mrs Jackson, Rev. D. O. Ramsay, D.D., Miss Ramsay, and Mr John Stevens, M.A.

Saturday, 5th September.

The fourth field meeting of the session was held in the Moffat district. The party drove from Beattock Station to Auchencass, a ruined castle in Kirkpatrick-Juxta parish, and made a careful examination of the ruins which stand on a piece of ground between the Evan and the Garpol waters. The castle is supposed to have been built by Randolph, Earl of Murray, and Regent of Scotland. All that now remains of it are pieces of the walls, from 10 to 15 feet thick, and one of the turrets in a good state of preservation. The interior of the quadrangle is 120 feet. Hogg makes it the residence of the famous Annandale warlock, William Wilkin—

To Auchin Castle Wilkin hied
 On Evan banks sæ green ;
 And lived and died like other men,
 For aught that could be seen.

After paying a visit to Garpol Linn, the party proceeded to

Holmshaw, and inspected the Roman camp and supposed fort there. The traces of the Roman road were also inspected with great interest. The fort on Chapel Hill, supposed to be British, was next visited, and then the party drove to the site of the old chapel, which is said to have belonged to the Knights Templar. The Order was suppressed in 1316, so that, if this chapel belonged to them, it must be at least 600 years old. A large part of the east gable is still preserved, and of the west gable an entire window, which would indicate that the chapel was a fine and costly edifice. The "Three Stannin' Stanes" were next visited. Some suppose that they are of Roman origin, the Roman road having passed near this point. Others hold them to be of Druidical origin; while a third supposition is that they commemorate the defeat at this place of Edward Balliol by Douglas and Randolph. The next move was through the town of Moffat to Alton Moat, supposed to mark the spot of the "auld toon" of Moffat in very early times. After driving to the Well, the party returned to Moffat, and paid a visit to the old churchyard, which contains the tombs of John Louden Macadam, the improver of the system of road-making, and of John Williamson, the discoverer of the Hartfell Spa. It was suggested by Dr Chinnock that the heritors of Dumfries might take a lesson from those of Moffat in the way to keep a churchyard. The arrangements of the day were under the management of Mr John Thorburn Johnstone, of Moffat, a member of the Society.

New Member.—Mr Samuel Macmillan, of Moffat.

Report on Herbarium. By Mr G. F. SCOTT-ELLIOT, M.A.

The herbarium is rapidly becoming one of the very best collections of British plants in Scotland. In fact, excepting Edinburgh and Glasgow, I know of no Scotch public institution which possesses so full a representation as that of the Society. I have compared recently the earlier orders to the end of Cruciferae with the British Museum, and named so far as I could every sheet after the types in that collection. Where possible I have hunted down every specimen to the nearest name in the London catalogue, and members of the Society may, I think, be pretty certain

that, in these earlier orders, even the critical species are what they profess to be. The rest of the herbarium is not named up to the London catalogue, but after Bentham's *Flora*, and only pretends to give the species in Bentham's sense.

I regret to say, however, that members of the Society have not availed themselves of the collection to the extent which I hoped. Miss Hannay has very kindly offered to allow any member of the Society to consult it during the winter at her house (St. Mary's House). The Society is deeply indebted to Miss Hannay for again offering to take charge of the herbarium during the cold and wet winter months, when it might perhaps suffer damage in a fireless room. While on this point, I should like to point out to members the importance of consulting frequently the plants themselves. A text book of botany is simply an attempt to portray in words the facts which, in a herbarium, are open to one's hand and eye. Every text book is liable to error, and no text books perhaps are more misleading than botanical ones. The compiler of such a book, being human, makes mistakes; and the student, being also human, is liable to misunderstand the compiler. Hence, for saving of time, and for real nature study, the study of a text book should be quite subordinate to that of the plants themselves.

The Society has also to thank the Misses Hannay for the mounting of every specimen—a labour which has occupied an enormous time, and which requires the greatest care and unremitting attention. The manner in which the plants have been mounted is simply perfect, as members may see for themselves. We have also to thank the Misses Hannay for a very large number of specimens, and thanks are likewise due for specimens received from the following ladies and gentlemen—Miss Adams and Miss S. D. Johnston, Miss Milligan, Miss Copland, Miss Hamilton, Mrs Thomson, and Mrs Gilchrist-Clark; and Mr Coles, Mr Corrie, Mr Harper, Mr J. T. Johnstone, Mr M'Andrew, Mr Masterman, and Mr Scott-Elliot.

I venture, however, to ask the members of the Society again to send as many specimens as possible to me or the Misses Hannay, even if it is only for naming, partly because it is only in this way that names can be kept quite correct, and partly in order that the many doubtful or rare plants of the County can be successfully kept in order. It is very important that specimens with ripe fruit should be sent, as in many critical forms the fruit

is the distinguishing characteristic. Full details of the environment and altitude add a real scientific value to every specimen; and I am sorry to say that such details are very rarely present. With the sanction of the Society, I propose next summer to begin exchanging, so that we may bring the herbarium up to and perhaps beyond that of any other Society.

NEWTON, *September, 1891.*

HONORARY MEMBERS.

- E. G. BAKER, F.L.S., British Museum.
 J. G. BAKER, F.R.S., Royal Herbarium, Kew.
 ROBERT BARBOUR (late Secretary), Cape Town.
 ARTHUR BENNETT, F.L.S., Croydon.
 GEORGE F. BLACK, Ph.D., Antiquarian Museum, Edinburgh.
 J. HARVIE BROWN, F.L.S., Dumipace, Larbert.
 WILLIAM CARRUTHERS, F.R.S., British Museum.
 JAMES DAIRON, F.G.S., Glasgow.
 Dr ANSTRUTHER DAVIDSON, Los Angeles, California.
 Dr BETTERSHELL GILL, London.
 Dr JAMES GRANT (Bey), Cairo.
 PETER GRAY, Edinburgh.
 R. HENDERSON, Manitoba.
 J. J. KING, Glasgow.
 WILLIAM HASTINGS, Taxidermist, Dumfries.
 WILLIAM LENNON, Dumfries.
 WILLIAM M'ILWRAITH, Rockhampton, Queensland.
 J. M'MEEKING, Hobart Town.
 Dr DAVID SHARP, F.R.S, Cambridge University.
 J. STARFORTH, Architect, Edinburgh.
 Dr ROBERT H. TAYLOR, Liverpool.
 JOSEPH THOMSON, F.R.G.S., Thornhill.
 R. TURNER, Glasgow.
 JOSEPH WILSON (late Secretary), Liverpool.

LIFE MEMBERS.

- Miss DOBIE, Penfillan House, Penpont.
 ALEXANDER YOUNG HERRIES, J.P., Spottes.
 J. J. HOPE-JOHNSTONE, J.P., Raehills.
 W. H. MAXWELL, J.P., Munches.
 W. J. MAXWELL, Advocate (Chairman of County Council),
 Terraughtie.
 W. D. ROBINSON-DOUGLAS, J.P., Orchardton.
 MARK J. STEWART, M.P., Barrister, Southwick.

CATALOGUE OF BOOKS.

This Section was Presented by R. Dinwiddie, Esq., of New York, being the Scientific Part of His Late Father's (R. Dinwiddie, of New York) Library.

11. Academy of Sciences. Transaction in New York. 4 vols.
25. Agardh, C. A. System of Algae.
57. Agassiz, L. Principles of Zoology.
61. Agassiz, E. C. and A. Seaside Studies in Natural History.
119. America. Annual Report, Coast Survey.
10. American Association, Proceedings of. 29 vols.
12. Annals of Lyceum of Natural History of New York. 11 vols.
30. Bailey, J. W. Microscopical Examination of Soundings.
18. Balfour, J. H. Botany.
55. Bain, Dr A. Zoology, Physiology, and Meteorology.
94. Beale, L. Illustrations, how to Work the Microscope.
95. Beale, L. How to Work the Microscope.
82. Beale, L. The Microscope in Medicine.
58. Beneden, P. J. Van. Animal Parasites.
100. Beck, R. The Achromatic Microscopes.
43. Berkely, N. J. Cryptogamic Botany.
116. Brewster, Sir D. Natural Magic.
51. Brewster, Sir D. Treatise on the Microscope.
68. Carpenter, W. B. Animal Physiology.
89. Carpenter, W. B. The Microscope.
15. Carpenter, W. B. Vegetable Physiology and Systematic Botany.
124. Cassino, S. E. Naturalists' Directory. 1878.
88. Catlow, Agnes. Drops of Water.
76. Chambers, R. Vestiges of Creation.
86. Clarke, L. L. Objects for the Microscope.
41. Cooke, N. C. Grevillea. Vols. 1, 2, 3, 4 (bound in 2 vols).
22. Cooke, N. C. Handbook of British Fungi. 2 vols.
39. Cooke, N. C. Fungi.
21. Cooke, N. C. Curiosities of Vegetation.
40. Cooke, N. C. Microscopic Fungi.
19. Cooke, N. C. Ponds and Ditches.
20. Cooke, N. C. Woodlands.
73. Dana, J. D. Manual of Geology.
74. Dana, J. D. Mineralogy.
93. Davis, T. Preparation, &c., of Microscopic Objects.
13. Edgeworth, N. Parkenham. Pollen.
49. Edwards, A. M. Life Beneath the Waters.
32. Farlow, W. G. Marine Algae of New England.
91. Ferguson, J. The Microscope and its Revelations.
114. Fergusson, J. Astronomy.
122. Gibbon, N. L. H. On the Amazon Valley. 3 vols.

120. Geological Survey. U.S.A.
 118. Glasgow. Science Lectures.
 105. Goring, C. R. Microscopic Illustrations.
 85. Gould, C. Companion to the Microscope.
 57. Gould, A. A. Principles of Zoology.
 23. Grattann, W. H. British Marine Algae.
 24. Gray, J. E. British Algae.
 17. Gray, A. Manual of Botany.
 37. Grove, W. B. Bacteria and Yeast Fungi.
 87. Griffith, J. W. Text Book of the Microscope.
 98. Hannover, A. Construction, &c., of Microscope.
 28. Harvey, W. H. British Marine Algae.
 33. Hassall, A. H. British Fresh Water Algae.
 79. Hassall, A. H. Microscopic Anatomy. 2 vols.
 27. Hervey, A. B. Sea Mosses.
 65. Hitchcock, Romyn. Fresh Water Rhizopods.
 53. Henfrey, A. Botanical and Physiological Memoirs.
 104. Hogg, J. The Microscope.
 59. Huxley, T. H. Crayfish.
 113. Ives, C. The Isles of Summer
 66. Jones, J. M. The Naturalist in Bermuda.
 102. King, J. The Microscopist's Companion.
 80. Kölliber, A. Manual of Human Microscopical Anatomy
 46. Kützing, F. T. Bacillarien.
 26. Kützing, F. T. Species Algarum.
 96. Lardner, D. The Microscope.
 47. Landsborough, Rev. D. British Zoophytes.
 48. Landsborough, Rev. D. Seaweeds.
 35. Lilljeborg, C. P. Diatomacearum.
 36. Lindsay, W. L. British Lichens.
 109. Lommel, E. The Nature of Light.
 54. Macdonald, J. D. Microscopical Examination of Drinking Water.
 83. Mandl, L. *Traité Pratique du Microscope*.
 70. Mantell, G. A. Animalcules.
 75. Mantell, G. A. Geology. 2 vols.
 72. Mantell, G. A. Thoughts on a Pebble.
 117. Manchester. Science Lectures. 2 vols.
 121. Maury, M. F. Physical Geography of Sea.
 103. Micrographic Dictionary.
 3. Microscopical Science, Quarterly Journal of. Vols. 1-8, and New Series, 1-14.
 4. Microscopy, The American Journal of. Vols. 1-6 (in 3 vols.).
 5. Microscopical, The American Monthly Journal. Vol. 7.
 6. Microscopical Society of New York, Journal of. Vol. 1.
 7. Microscopical Journal, The American Quarterly. Vol. 1 (1879). Vols. 1 and 2 (1880).
 8. Microscopical Society (London), The Transactions of. Vol. 1.
 9. Microscopical Society (London) Journal. 2 vols. (1) 1841 (2) 1842.

101. Microscopical Tracts.
 45. Moore, Thomas. British Ferns.
 1. Nature, A Journal of Science. Vols. 1-30.
 106. Natural Philosophy. 2 vols.
 34. Nave, J. Algae, Fungi, &c.
 115. Nichol, J. P. Architecture of the Heavens.
 125. Nordenskiöld, A. E. Voyage of the Vega.
 99. Notcutt, W. L. The Microscope.
 78. Page, D. Rudiments of Geology.
 110. Pereira, J. Lectures on Polarised Light.
 69. Quekett, J. Lectures on Histology.
 84. Quekett, J. The Microscope.
 22. Rabenhorst, L. Flora Europaea Algarum.
 30. Rabenhorst, L. Süßwasser Diatomaceen.
 112. Reid, H. Chemistry of Art.
 50. Rennie, J. Botany and Insects.
 77. Rhind, William. Geology of Scotland.
 60. Romanes, G. J. Jelly Fish, Star Fish, &c.
 2. Science Gossip. Hardwicke. Vols. 1-23.
 14. Schacht, Dr Hermann. Microscopical Vegetable Anatomy and Physiology.
 62. Schmidt, Oscar. The Mammalia.
 81. Schwann, T. H. Microscopical Researches.
 52. Slack, H. J. Marvels of Pond Life.
 31. Smith, Rev. W. British Diatomaceae.
 123. Smithsonian Report. 1868.
 38. Sprengel, K. Cryptogramous Plants.
 90. Suffolk, W. T. Microscopical Manipulation.
 44. Trouessart, E. L. Microbes, Ferments, and Moulds.
 108. Tyndall, J. Notes on Light.
 111. Tyndall, J. Forms of Water.
 97. Ward, Mrs. Microscope Teachings.
 67. White, Rev. Gilbert. Natural History of Seborne.
 71. Wood, Rev. J. G. Common Objects of Microscope.
 16. Wood, A. Class Book of Botany.
 29. Wood, H. C. History of the Fresh Water Algae of N. America.
 107. Woodward, C. On Polarised Light.
 56. Woodward, S. P. Mollusca.
 63. Woodward, S. P. Mollusca.
 92. Wythes, J. H. The Microscopist.

GENERAL CATALOGUE.

Presented by Members and other Societies, &c.

167. Annan and its Neighbourhood. F. Miller.
 138. Annotation on the Bible. Haaks. 1857. 2 vols.

177. Antiquarian Society, Transactions of Dumfriesshire and Galloway. 1862-68.
126. Antiquaries of Scotland, Proceedings of the Society of. 11 vols. 1878-79 to 1889-90.
127. Antiquaries of Scotland, Transactions of. Vol. I., 1782-92, and vol. VI., 1867.
128. Antiquary, The. 1887.
131. Bain's Calendar of Documents. Vols. I. and II.
130. Bible, The Dutch Annotations on the whole. By Thomas Haak. 1857. Vols. I. and II.
132. Birds, History of New Zealand. By W. L. Buller. Vol. I.
180. Botanica, Philosophia. By Caroli Linnæ. 1755.
181. (Botany) General Plantarum. By Caroli Linnæ. 1764.
133. British Association Reports. 5 vols. 1886 to 1890.
179. British Association Handbook. 1891.
134. Burnside, Dr, Manuscript History of Dumfries.
172. Currency, Report on U.S.A. Published by Smithsonian Institute. 1885.
134. Dumfries, MSS. History of. By Dr Burnside.
135. Dumfries, MSS. History of. By Theodore Edgar.
136. Dumfries, MSS. Copy of, Trades Minutes. 1601-1809.
163. Dumfries Presbytery, Catalogue of Books. 1784.
164. Dumfries Society Library Catalogue. 1851.
168. Dumfries Savings Bank. By Rev. Henry Duncan. 1815.
138. *Dumfries Weekly Journal*. 1793-95, 1801-1803, 1809-15, 1826-27.
137. *Dumfries Weekly Magazine*. Vol. XV. 1776.
177. Dumfries Natural History and Antiquarian Society, Transactions of. 1862-68. 1 vol.
135. Edgar, MS. History of Dumfries.
171. Ethnology, Bureau of. 5 vols. 1879 to 1884.
176. Ethnology, North American U.S., Survey of, Rocky Mountains. Vol. V.
182. Flora of Dumfriesshire. By G. F. Scott-Elliot.
160. Flora of West Yorkshire. F. A. Lees.
139. Fossils, Western Scottish Catalogue of.
169. Freemasons at Thornhill, Lodge of. By D. M. Lyon.
140. Fungi, British. Peter Gray.
141. Gardener's Dictionary. P. Miller. 3 vols. 1748.
173. Geological and Geographical Survey, U.S.A. 5 vols. 1870 to 1877.
174. Geological Survey Report, U.S. 1 vol. 1867-69.
175. Geological Survey Report, U.S. J. M. Powell. 8 vols. 1881 to 1888.
183. Geology of Moffat. By W. Carruthers. 1862.
142. Grevillea. In 2 vols., 1-3, 4-6.
143. Highland Society's Transactions. Vol. I. 1799.
144. Historic Society, Lancashire. 3 vols., I., IV.-V., and VII.
146. Insectorum Sive Minimorum Nimalium Theatrum. Tho. Movfeti. 1634.

145. Irish Royal Academy. Vol. XIV.
147. Lincluden, Chronicles of. W. M'Dowall.
148. Linnean Society. Vols. XIII. to XXIX. Zoology.
149. Linnean Society. Vols. XIV. to XXV. Botany.
166. " Macs " in Galloway. By P. Dudgeon.
150. Magnetic Observations. J. A. Brown. 6 vols.
- 103B. Micrographic Dictionary. J. N. Griffith. (See also 103.)
151. Medals, Treatise on. Addison. 1726.
165. Notes on the Established Churches of Dumfries. 1865.
152. Philosophical Journal. 9 vols. 1848-54.
161. Physician's Library. Nich. Culpeper. 1653.
153. Poems and Songs of Susanna Hawkins. Vols. IX. and X.
154. Quair, The King's. A poem by James I. 1815.
155. Road Guide. James Lennox.
 - 2B. Science Gossip. Hardwick's. 1886-87. (See also 2.)
156. Scientific Society's Year Book. 1884.
158. Scotia Illustrata Sive Prodromus Historiæ Naturalis. Dr R. Sibbald.
1715.
157. Sea Weeds. P. Gray.
162. Sermons. J. C. 1685.
178. Shells, Land and Freshwater, of the British Isles. By R. Rimmer.
170. Smithsonian Report. 30 vols. 1874 to 1888.
185. Sculptured Stones of Eastern Scotland. By R. Carr.
159. War, Art of. Wightman's Copy.

Also, a large number of unbound volumes, consisting chiefly of kindred Society's publications, both British and Foreign.

R U L E S.

1. The Society shall be called the "DUMFRIESSHIRE AND GALLOWAY NATURAL HISTORY AND ANTIQUARIAN SOCIETY."

2. The aims of the Society shall be to secure a more frequent interchange of thought and opinion among those who devote themselves to the study of Natural History, Archæology, and Kindred Subjects; and to elicit and diffuse a taste for these studies.

3. The Society shall consist of Ordinary and Honorary Members. The Ordinary Members shall be persons proposed and elected at any Meeting of the Society by a vote of the majority present. The Honorary Members shall be persons distinguished for attainments connected with the objects of the Society, and elected on the recommendation of the Council.

4. Ordinary Members shall on election pay the sum of 2s 6d entrance fee (ladies excepted), and contribute annually 5s in advance, or such other sum as may be agreed upon at the Annual Meeting. When more than one person from the same family joins the Society all after the first shall pay half-fee, and the maximum amount from any one family shall not exceed 10s. By making a single payment of £2 2s they become Members for Life.

5. The Office-bearers of the Society shall consist of a President, four Vice-Presidents, Secretary, Treasurer, Librarian, Curator of Museum, and Curator of Herbarium, who, together with Ten other Members, shall constitute the Council, holding office for One Year only, but being eligible for re-election. Three to form a quorum.

6. The WINTER MEETINGS of the Society shall be held on the FIRST FRIDAY of each month, beginning with October and ending with May, at which papers will be read and discussed, objects of interest exhibited, and other business transacted.

7. The FIELD MEETINGS shall be held on the FIRST SATURDAY of each month, beginning with June and ending with September,

to visit and examine places of interest, and otherwise carry out the aims of the Society. Arrangements for these Meetings shall as far as possible be made at the April Meeting.

8. The ANNUAL MEETING shall be held on the FIRST FRIDAY of OCTOBER, at which the Office-Bearers and other Members of Council shall be elected, Reports (general and financial) submitted, and other business transacted.

9. A Member may introduce a friend to any Meeting of the Society—such friend not to be admitted more than twice during the Session.

10. The Secretary shall keep a Minute Book of the Society's Proceedings, and a Register of Members, and shall give in a Report at the Annual Meeting.

11. The Treasurer shall collect the subscriptions, take charge of the funds, and make payments therefrom under the direction of the Council, to whom he shall present an Annual Account, to be audited for submission at the Annual Meeting.

12. The Secretary shall at any time call a Special Meeting of the Society on receiving the instructions of the Council, or a requisition signed by Six Members.

13. The Society shall have the right to publish in whole or in part any paper read before it.

14. Members whose subscriptions are in arrears for nine months, and have received notice from the Treasurer, cease to be Members unless satisfactory reasons for non-payment be given to the Council.

15. Alterations of any Rule, or the addition of New Rules, shall only be made with the consent of three-fourths of the Members present at any meeting, notice of the same having been given at the previous Monthly Meeting.

