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VIEW
OF THE
ZETLAND ISLANDS.

1917

A
VIEW
OF THE
ANCIENT AND PRESENT STATE
OF THE
ZETLAND ISLANDS;
INCLUDING THEIR
CIVIL, POLITICAL, AND NATURAL HISTORY;
ANTIQUITIES;

AND
AN ACCOUNT OF THEIR AGRICULTURE, FISHERIES, COMMERCE,
AND THE STATE OF SOCIETY AND MANNERS.

BY
ARTHUR EDMONDSTON, M. D.

IN TWO VOLUMES.

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A
V I E W
OF THE
ANCIENT AND PRESENT STATE
OF THE
ZETLAND ISLANDS.

CHAPTER VIII.

OF THE MANUFACTURES AND TRADE OF
THE ZETLAND ISLANDS.

THE manufactures of Zetland are but few, and these, in general, imperfectly conducted. The knitting of worsted stockings, caps and gloves, on wires, by the women, is among the most ancient. Stockings have been made in Zetland, which have sold as high as thirty shillings, and as low as fivepence Sterling, per pair; and it is by no means uncommon to obtain the wool of which both kinds are manufactured, from the same animal. Some years ago, the coarse stockings were objects of ge-

neral sale, and great numbers were exported annually. Before the late and present wars interrupted the intercourse between the Dutch and the Zetlanders, the quantity of stockings sold to these foreigners in the country, by the manufacturers themselves, was very great. Indeed, the assemblage of the busses in Bressa Sound, about the 24th of June, constituted an annual fair, where every variety of this species of manufacture was exposed to sale. As the market was open to all, industry was encouraged, and dexterity rewarded.

Besides the sale to shipping, stockings are bartered at Lerwick, to the shopkeepers, for such commodities as the people need; and, like the wadmál of Iceland, form a principal article of exchange in the country. As the stockings are all made on wires, the manufacture of them is very slow; so that after deducting the expence of the wool, the reversion to the individual engaged in it, is comparatively trifling.

I have stated, that part of the land-rent was formerly paid in a species of coarse cloth

denominated wadmill, of which the manufacture must at one time have been very general. Although that mode of payment has been long discontinued, the number of weavers in the country is still great. They occur in every parish, and weave blankets, and a kind of cloth, or *clait*, as it is called, for the ordinary wear of the country people. This latter is dyed of different colours, but the most general is a light blue. I have seen specimens of this kind of cloth, of which the execution was by no means contemptible, and which a little care might have greatly improved. A regular manufactory for coarse cloth, on a small scale, with a view to the consumption of the inhabitants, might be successfully established in Zetland. The wool would then be advantageously disposed of, and many hands, at present idle, employed in spinning it. The quantity of cloth imported annually is very great, and the rage for this kind of finery is increasing daily, even among the poorest inhabitants.

In 1770, a linen manufactory was established at Catfirth, in the parish of Nesting, and seven-

ral of the principal gentlemen in the country had shares in it. The management of it was entrusted to a native of the country, who had served an apprenticeship to a weaver, and was himself also a subscriber. It did not appear to be so much an object of this company to manufacture linen, either for exportation or for general sale to the people, as to serve as an accommodation to persons residing in Zetland, who furnished the materials and paid for the weaving of them. This plan, although calculated, perhaps, to diminish risk, was not likely to render the scheme a productive concern; and as the first establishment had been necessarily expensive, after a trial of six years, like many other corporate associations, the returns were swallowed up, and the original capital of £. 1600 lost. Some years after this failure, the original subscribers renewed the manufactory under the management of a person from Orkney, but it failed also, and nothing of the kind has been attempted since.

The obvious causes which led to the failure of this establishment, were the hurried and expensive manner in which it was begun, and

the want of attention to ensure a due supply of materials for carrying it on. Some difficulties also attended the obtaining a convenient situation for the works, which were at last accidentally destroyed by the breaking down of the dykes of the reservoir for the water which drove the mill.

Kelp has been manufactured for many years in the Zetland islands, although the introduction of this manufacture was much later in them than in Orkney. About 1760, several heritors employed a person from Orkney to survey their shores, and to give his opinion on the quantity of kelp which he thought they could produce. After examining them, he reported, that under proper management the whole might be made to yield forty tons annually. The manufacture was immediately begun, and the very first attempt produced twice as much as the surveyor had conceived the shores capable of yielding. From that time the quantity gradually increased, but it never exceeded four hundred tons until 1808, when it amounted to somewhat above six hundred tons.

Before 1808, the yellow tang (*fucus nodosus*), and the black tang (*fucus vesiculosus*), were the only species of *fuci* used in the manufacture of kelp, and the following is the mode in which it is conducted. The proprietor or tacksman of the shores, employs a person acquainted with the making of kelp, to burn the tang on them into kelp, for which he pays him from £. 2 to £. 2. 10s. per ton. The latter manages it by means of women and boys, whom he hires at a low rate by the month, or by the tide. The tang is cut by hooks similar to those employed in harvest in the reaping of corn; and it is spread on the grass, where it remains until it be sufficiently dried. A pit is then dug in the ground, about five feet long, two and a half deep, and three broad, which is denominated a kelp kiln. A small portion of ware is first kindled, and successive portions are added, till the kiln be nearly filled with a glutinous semi-fluid matter, of a dark blueish-grey colour, which is the kelp. When brought to this state, it is raked backwards and forwards, until the whole mass becomes of an equal consistence. It is then allowed to cool, and harden, and in this indurated state it is sent to market.

This manner of manufacturing the kelp is liable to many obvious objections. As the heat is not sufficiently confined, the fusion is almost always imperfect, and the quantity of alkali in any given portion of kelp, is therefore much less than it might be, were the heat more constant and steady. During the melting of the ware, considerable quantities of different kinds of earthy matter are mixed with the melting materials, and these diminish the worth of the kelp. Professor Jameson of Edinburgh has been at pains to examine kelp, obtained from different parts of Scotland, and to compare them together, and also with the barilla of Spain. He found, that in 100 lib. of barilla, there were $23\frac{1}{2}$ of alkali, while the same quantity of Zetland kelp yielded only $2\frac{1}{2}$ per cent. That obtained from the isle of Skye appears to have been the best kind of Scotch kelp examined on this occasion, for it yielded five per cent. My friend, Mr Murray, was so obliging as to analyse a portion of Zetland kelp, made last summer, which, although considered good kelp, scarcely yielded two per cent of alkali.

The late Mr. Jameson of Leith endeavoured, by a series of experiments, to ascertain the value of kelp burnt in the manner described, and that made in furnaces. He erected several different kinds of furnaces, and found uniformly, that the kelp made in them contained a greater quantity of alkali than common kelp. The following he conceived to be the best form of a furnace: "It consists of one fire-place covered with an arch, which communicates with four reverberating cavities, into which the ware is to be thrown. This fire-place, with a small quantity of fuel, produced a kelp of greater strength than any he had examined during his long practice; and upon calculation it was found, that the expence of furnace and fuel was greatly more than repaid by the increased value of the kelp." A kiln or furnace of this kind would cost about £. 30, with the addition of a small sum for a shade, to protect the kelp, when made, from the effects of the weather; but the expence of a single kiln would not exceed £. 7 or £. 8: while the latter, however, burns only one, the former burns four tons of kelp a-day.*

* Mineralogy of the Scottish Isles, vol. ii.

I have already observed, that previous to 1808 the tang was the only species of sea-weed burned in Zetland in the manufacture of kelp. Owing to the unsettled state of Spain, the American embargo, and war with the northern powers, kelp rose very much in price, and every effort was made to manufacture as much of it as possible. Although the landlords and tacksmen retain the regular shores on which the tang grows, in their own hands, they have not yet attempted to claim those other species of sea-weed, which by combustion may be formed into kelp; such as the prickly tang (*fucus serratus*), and the tangle (*fucus digitatus*): these adhere to rocks in deeper water, and, when driven on shore by the force of the waves, constitute what is known by the name of *drift-ware*, and have been used chiefly as a manure. Last year, however, more than one hundred tons of kelp were made from these plants, of a quality superior to that obtained from the ordinary tang. The people cut it from the rocks and manufactured it themselves, and sold the kelp to the superintendents of the regular shores, at the rate of five shillings per hundred weight.

The price of kelp at Leith and London continued long to be from £. 5 to £. 8 per ton. In 1808 it sold in Zetland as high as £. 12 per ton; and most of the kelp manufactured in the country this year, is already contracted for at £. 10. 10s. per ton. But as the price of kelp has fallen considerably since 1808, the contractors must lose by the agreement.

As kelp is a valuable article, and used in different manufactures, it becomes an object of primary importance to increase the sources from which it is obtained, and to render it pure and good. Hitherto the proprietors of kelp shores have limited themselves, in this respect, to the quantity of tang which spontaneously grew on the shores, and have never made any exertion to increase their fertility. The seeds of these marine plants abound every where in the sea, and they appear to grow wherever there are stones to which they can attach themselves, and from which the force of the waves cannot dislodge them. To increase the extent of surface on which they can grow, in situations protected from the violent surf of the sea, seems to be all that is necessary

to ensure their production. With this view, sandy or gravelly shores should be covered with stones, near the mark of ebb; and Dr Walker recommends, that the stones should be "from 20 lb. to 200 lb. weight and upwards, and not more than two feet distant from each other."* But the size of the stone may be regulated by the degree of surf to which the shore is exposed. As it has been observed, that the more the stones are exposed to the air during the tide of ebb, the heavier is the crop of tang which they bear, they ought to be arranged in such a manner as to attain this end. The harder kinds of stone are the best adapted for this purpose, as their surface is less liable to be acted on by the sea, and the plants acquire a firmer hold than on free-stone.

There are many extensive bays in Zetland, which might be planted in this manner, so as to be made to yield the materials of a vast addition to the present quantity of kelp. Balta Sound, in the island of Unst; Basta and Mid-Yell-voes, in the island of Yell; the deep bays

* Transactions of the Highland Society, vol. i.

in the parishes of Lunnasting, Delting, Weesdale, Aithsting, Sansting and Walls, are capable of having the tang increased in many instances tenfold. The expence attending the laying down of stones would not be very great, and the indemnification is certain. It has been ascertained by the concurrent testimony of competent judges, that shores prepared in the manner already mentioned, for the reception of the seeds of these plants, will contract a growth upon them fit to be reaped in four years, and, when once produced, the recurrence is uniform and steady.

The sea-wrack, and the tangle, now that they have been experimentally found to yield good kelp, should also be attended to. Great quantities of drift-ware come on shore in some places in winter and spring, beyond what can be used as manure. Reverberatory furnaces, in which the ware can be burned in winter as well as in summer, might be erected in some places, and they would soon defray the expence of their establishment. In cutting the tangle, and those other kinds of fuci which grow in deep water, it would facilitate the

operation to employ a sharp scythe with a hook at the end of it. It is both a troublesome and a tedious operation to pull the tangles up by the roots.

It has been a question among chemists, whether the soda pre-exists in these marine plants, or be merely developed by their combustion. From the experiments of Duhamel and Cadet it appears, that if marine plants be removed to inland situations they gradually cease to yield soda, and produce potassa.* This capability in the plant to decompose and change the substances which surround it, and to form new compounds, is common to all vegetables; but they seldom exhibit the substance in a separate state, and in the present instance it appears to be in that of carbonate of soda. The soda of marine plants is no doubt derived from the sea, but, according to the experiments of Vauquelin, it is combined with the carbonic and muriatic acids; and combustion, by destroying the carbonaceous, tends to develop the saline matter.† I have frequently observed,

* *Memoires de l'Academie des Sciences.*

† *Annales de Chimie.*

that the dead plant, provided that its texture be not affected, is capable of absorbing or retaining in its substance a much greater proportion of saline matter, than when it is attached to the rocks. This may be ascertained by the taste, and by infusion in fresh water; and it is probably the cause why drift-ware, when free from putrefaction, yields the best kelp.

In 1802, a manufactory for plaiting straw was established at Lerwick, by a gentleman who resides in London. The straw is brought prepared to Zetland from Dunstable, and is plaited by girls into any form which the manager directs. About ninety girls were employed at it for several years, and, although at present on the decline, it still occupies from fifty to sixty.

Some time after the establishment of the first straw manufactory, another was begun at Lerwick, and a branch of this second one established in the parish of Dunrossness, where another new one has been since introduced. There are therefore, at present, no fewer than three straw manufactories in the country, which

employ from one hundred and eighty to two hundred girls daily. The girls receive a penny or a penny-halfpenny for each yard of plaited straw, according to the quality of the plait; and a few of them can earn from seven to eight shillings a-week. The girls display much skill in plaiting the straw, and most of them very readily acquire the mode of doing it.

The establishment of a rope manufactory, for lines to the fishermen, and cordage to their boats, might be easily effected, and it would certainly be advantageous to the country. To render it extensively useful, both landholders and tacksmen should have a share in it. Besides employing several individuals, a considerable sum of money, at present sent out of the country, would remain in it, and occasional deficiencies in lines be readily made up. As the price of lines varies very much, and as they are deemed a perishable commodity, each individual imports only the number which is barely necessary, so that in the case of meeting with any loss, it is often impossible to replace them. A manufactory in the country would remedy this inconvenience, and any change on

on the size or kind of lines could be easily introduced.

The early trade of Zetland, as we have seen, was confined chiefly to an exchange of fish for fishing materials, and a few articles of luxury, between the tenants themselves, and the Dutch, Flemings and English. When the landholders took the management of the fishing into their own hands, this commerce was rather extended than changed. They possessed vessels themselves, and exported fish and oil to Hamburgh and Holland, with the view of importing lines and fishing materials in return, as these articles could be purchased there at a cheaper rate than in Britain. Lines, however, constituted the smallest part of the cargo; spirits and tea were smuggled in large quantities, every year, by these vessels, which cleared out for Hamburgh, and thus the government was doubly defrauded. Several of the vessels were seized at different times, before landing their cargoes, by the officers of the revenue; and the excise cutters frequently visited the country, and, landing their crews, ransacked every cellar, and carried off great quantities of contraband goods. Not-

withstanding these repeated losses, this illicit trade was still carried on, to the prejudice of the country, the corruption of morals, and the disgrace of those concerned in it.

It is twenty years since the landholders renounced any open connection with this trade, and no vessels belonging to them have since that time engaged in it. But instead of being discontinued on that account, it was vigorously prosecuted by vessels belonging to the merchants of Lerwick, and on their capital, until the increasing number, and vigilance of the revenue officers, rendered the practice no longer either safe or advantageous. Notwithstanding the heavy penal statutes against this trade, and the repeated indulgence of Government to those avowedly concerned in it, a bold attempt was made in 1804 and 1805 again to revive it; but the vessels were seized, and that part of the cargo which escaped being taken by the officers, was embezzled by those to whose care it had been entrusted.

The regular trade with Hamburgh had been declining before the commencement of last

war, and considerable quantities of fish had been bought annually, both by English and Irish merchants, and exported to Spain. But for several years a great proportion of the fish has been sent to Great Britain and Ireland, by Zetland merchants.

There has been long a constant trade between Lerwick and Leith, which occupies two sloops, about seventy tons each. There is also a considerable intercourse between Lerwick and Aberdeen, by means of a packet which carries the mail. The number of vessels belonging to Zetland, and the amount of their tonnage, is greater at present than it has been at any former period. The following is a state of it :

Ships, 10 ; tons, 768 ; men and boys, 53.

The larger vessels are seldom engaged in carrying the produce of the country, but are employed on freight, wherever it can be obtained.

The chief exports of Zetland are fish, oil, kelp, butter, beef, hides, tallow, stockings, calf

and rabbit skins. The imports consist of the luxuries, and even necessities of life. It is almost impossible to ascertain the exact amount of goods brought into the country, as they come from different places, and pay no duty in Zetland. It is even difficult to appreciate the amount of the exports, for many articles are sent out of the country, which are not suffered at the custom-house; some are included in a general sufferance, and a good deal is sold to vessels accidentally stopping at the islands. An average statement, therefore, of the amount of the exports and imports of Zetland, must be taken from a general acquaintance with the details of the trade, collated with the acknowledged returns of the custom-house.

The following statement will convey a tolerably correct idea of the balance of trade in Zetland.

Exports from Zetland.

1075 tons of ling, tusk, and cod, at 18l. 10s. - -	£. 19,887	10	0
45 ditto of sethe, at 10l. -	450	0	0
300 barrels of herring, at 1l. 7½. -	405	0	0
900 ditto of fish oil, at 2l. 10s. -	2250	0	0
500 tons of kelp, at 8l. -	4000	0	0
200 barrels of beef, at 2l. 10s. -	500	0	0
3 tons of tallow, at 60l. -	180	0	0
400 hides, at 10s. - -	200	0	0
20 tons of butter, at 50s. -	1000	0	0
Stockings, gloves, &c. -	5000	0	0
100 dozen calf skins, at 12s. -	60	0	0
150 dozen rabbit skins, at 7s. -	52	10	0
12 dozen otter skins, at 4l. 16s. -	57	12	0
Seal skins, - -	12	0	0
Feathers, - - -	50	0	0
150 horses, at 3l. - -	450	0	0
100 cattle, at 3l. - -	300	0	0
50 sheep, at 10s. - -	25	0	0
	<hr/>		
	£. 34,879	12	0

Imports to Zetland.

One regular trading sloop between Lerwick and Leith, makes seven trips every year, and imports each time, exclusive of provisions, goods to the amount of 2000l.	£. 14,600	0	0
Freights on the above,	-	350	0 0
Another regular trader also makes seven trips, and imports each time, exclusive of provisions, goods to the amount of 1500l.	10,500	0	0
Freights on the above,	-	245	0 0
Goods imported by vessels not in the Leith trade,	-	4000	0 0
Flour, barley, rice and bread,	3000	0	0
Grain and meal,	8000	0	0
500 tons of salt, duty free,	-	625	0 0
Freight on the above,	-	600	0 0
200 tons of coals, consumed by the regular inhabitants,	-	200	0 0
Wood, boats, and boards from Norway, including freight and duty,	-	1800	0 0
		<hr/>	
		£. 43,920	0 0

But, besides the amount of the exports, there are other sources of wealth directly coming into the country, which, in endeavouring to estimate the state of the trade, must be taken into the account, and they are chiefly the following.

Amount of annual exports brought forward,	£. 34,879	12	0
Money left in the country by the Greenland whale fishery,	7000	0	0
Money remitted by regular monthly allotments, by sailors in the navy; and money remitted from the navy, by independent bills,	3500	0	0
Money brought into the country, by the establishment of volunteers and sea-fencibles,	3600	0	0
Money brought into the country, by the straw manufactories,	2340	0	0
Profits derived from freights of vessels belonging to the country,	1000	0	0
Sale of beef, &c. to the navy, and other vessels,	1000	0	0
	<hr/>		
	£. 53,319	12	0

Brought forward,	£. 53,319	12	0
Deduct the amount of imports to			
Zetland,	43,920	0	0
			<hr/>
Balance in favour of Zetland,	£. 9,399	12	0

The balance of trade, notwithstanding the extent of the imports, is still considerably in favour of the country. The principal article of export is certainly the fish. The number of tons has, in some years, been nearly twelve hundred; but it has been as low as eight hundred. It has remained for some years between ten and eleven hundred tons, but were the mode of conducting the ling fishery to be improved, the quantity might be greatly increased.

The number of herrings caught and exported was much greater many years ago than it has been of late; but it is to be hoped, that the act for the further encouragement of the British white herring fishery, will be followed by a great and rapid increase in the quantity of this valuable article.

The kelp, too, may be expected to receive an annual augmentation, since the sources from which it is produced have been extended, and the means of improving them more generally known.

War appears to be more beneficial to Zetland than peace. Considerable sums of money are regularly sent into it from the navy during war, which is not the case in time of peace. The high wages to Greenland, and the certainty of employment for Zetland men in that trade in time of war, is occasioned by the difficulty of obtaining a sufficient number of hands for the purpose, either in England or Scotland. The price of all the exports is raised in time of war; but although it affect articles of luxury, it has little influence on those of ordinary consumption. The price of provisions in the country parishes, is nearly the same during war as in peace; nor are the markets at Lerwick affected, but by the residence of a small garrison, and the occasional rendezvous of ships in Bressa Sound.

CHAPTER IX.

**DESCRIPTION OF LERWICK; ITS SOCIETY,
AND MANNERS.**

LERWICK, the capital of the Zetland islands, is situated about the middle of Mainland, on its east side, and immediately opposite to the island of Bressa. Although possessed of no claims to great antiquity, yet neither the origin of the name, nor the time of its foundation are accurately known. There is a small town near the Naze of Norway called Larwick, and it is probable that Lerwick derived its name from resembling this place, either in situation or appearance.

In 1633, when captain Smith visited Zetland, the town of Lerwick was not in existence. That gentleman resided twelve months in the country, and was frequently in Bressa Sound, which

he describes as " a very gallant harbour, where ships may lye land-lockt for all winds;" but he never once mentions the word Lerwick, nor even hints that a single house stood on the site of the present town. When Brand was in Zetland, in 1700, Lerwick contained between two and three hundred families; but he adds, that about thirty years before, there were only four houses where two hundred then stood. It is probable, therefore, that Lerwick was built about the year 1670, and being situated in the neighbourhood of a fine harbour, much frequented by ships, its increase would, for a time at least, be very rapid.

In 1733, when Mr Gifford wrote his description of Zetland, Lerwick appears to have been in a less flourishing condition than in the time of Brand. Mr Gifford estimates the number of families to be about two hundred, and says that the trade of the town had been declining for several preceding years. It was then governed by a baillie, in the same manner as the other parishes of the country; but although all public letters were executed at the castle of Scallaway, the chief court of justice was then

held at Lérwick. This town continued to be slowly progressive until the beginning of the late war, but since that time it has increased considerably, both in the number of houses and inhabitants.

Lerwick is about half a mile long, and stands at the foot of a hill close to the sea. It is bounded on its north side by Fort-Charlotte, and on the south, by a small abrupt hill. These appear to be natural boundaries, for every increase has taken place in the direction of its breadth. It contains, at present, about three hundred houses, some of which are handsome. They are built of breccia, quarried above the town; and many of them have their doors and windows ornamented with freestone. The houses, however, have been set down without regard to any plan, and generally with their ends to the sea. The principal street, or rather row, which extends from one end of the town to the other, is in many places well paved with large flag: it is, however, of very unequal dimensions, and in some parts does not exceed six feet in breadth. The houses which are placed on the rising ground towards the hill,

and which have neat gardens attached to them, produce an agreeable effect; and they contribute much to ornament the town. Those which are built on the side next to the water, and which are fortified by a kind of hollow wharf projecting into the sea, form, where they occur, a double street, and afford shelter from the north and east winds, but they give the town a singular appearance. Viewed from the bay, at high water, it resembles an irregular fortification, these bulwarks appearing like so many bastions.

The greater part of the ground in the immediate neighbourhood of Lerwick, is in a rude and uncultivated state. It is an undivided common of an excellent soil, and nothing is wanting but a division of it, or a long lease, to induce several gentlemen to enclose and improve it. There are several roads which skirt the town, which were originally made in 1781 for the accommodation of troops. They are kept in a state of tolerably good repair by the exertions of individuals, and voluntary subscription.

Fort-Charlotte, which forms a chief ornament to the town, is said to have been originally constructed in the time of Cromwell. It was rebuilt by Charles II. in 1665, during his first war with Holland; but both the garrison and the guns were removed at the peace. In the next Dutch war, in the year 1673, an enemy's frigate entered Bressa Sound, when the fort was in this defenceless state, destroyed the principal place in the garrison, and burnt several houses in the town. It was completely new modelled in 1781, and called Fort-Charlotte, and in time of war always has a garrison of soldiers in it. It mounts twelve guns, and flanks the town, which it is calculated to protect from any attack from the sea. There are also in Lerwick two companies of volunteers and some sea-fencibles, whom the general flame of military ardour has called forth in the defence of their country; but the best defence of these islands is derived from the superintending influence of that flag which overawes the maritime world.

There is a respectable looking building, called the town-house, in which there are apart-

ments for the different purposes of court-room, custom-house, mason-lodge, and prison. This, and a neat church, are the only buildings of a public nature of which Lerwick is possessed.

The harbour is large, safe, and commodious, affording secure anchorage from sixteen to five fathoms water. It is formed by the island of Bressa and the receding shores of the opposite main, and is about two miles long. The south passage is the one at which vessels of a large draught of water enter, and go out. Nearly at the middle, where there is a rock, the harbour narrows, but it widens again into a deep bay. On account of this rock, vessels almost always moor between the middle and the south end, where indeed there is ample accommodation for a great number. The north passage is very narrow, and a rapid tide runs through it; nor are there in it, even at spring-tides, more than eighteen feet of water at its deepest point. There is no dry harbour at Lerwick, as the water does not fall above seven or eight feet; but small sloops unload, during fine weather, at the wharfs. Bressa Sound frequently affords shelter to men of war, and, at a small expence,

might be rendered a most useful station to our North Sea cruisers.*

Lerwick is so very ill provided with water, that in every dry season there is really a scarcity of this necessary article. This is owing, in a great measure, to the inattention and negligence of the inhabitants themselves, for there are some soft springs in its immediate neighbourhood.

There is no regular market at Lerwick, but the town is in general well, though unequally, supplied with provisions from the country, at comparatively moderate rates. The beef, which is small, but uncommonly delicate, has seldom exceeded fivepence per pound. It is frequently as low as twopence; but the average price

* In 1653 the English fleet, consisting of ninety-four men of war, under the orders of admirals Deans and Monk, lay some days in Bressa Sound. And in 1665 another fleet, under the earl of Sandwich, consisting of ninety-two sail of men of war, spent some time in the same harbour. *Description of the Isles of Orkney and Zetland, by sir Robert Sibbald*, fol. edit. p. 30.

throughout the year may be taken at three-pence-halfpenny per pound.

The native mutton is never sold by the pound, but in its season, a good sheep may be bought for six or eight shillings. The breed, however, has been improved in some places, by the introduction of a larger kind from Scotland; and a sheep of this latter description has, on some occasions, sold as high as a guinea. The veal is very bad, being almost always killed when but a few days old. A whole calf may be bought for half a crown, the skin of which alone sells for a shilling. Fresh beef and mutton are confined chiefly to autumn and the early part of winter, in consequence of the want of a sufficient quantity of fodder; but fresh meat is beginning to be more generally attainable at all seasons.

The poultry is very good, and when not affected in price, by the presence of shipping, is by no means dear. A goose, at Christmas, may be bought for 1s. 4d., a duck for 8d. or 10d., and a hen for 6d. Ducks are rather

scarce : they are expensive to rear, and are not generally liked.

There is a considerable variety of useful wild fowl in the country, such as snipe, duck, curlew, plovers, and the common blue pigeon; but it has never been the practice to shoot them for sale. There are no partridges nor moor-fowl. There appears to be sufficient cover for the latter on the hills between Walls and Sandness; and if they were judiciously introduced, and left unmolested for some time, they might thrive. There are no hares, but abundance of excellent rabbits in different places, and no game restrictions have ever yet operated in repressing the ardour of a Zetland sportsman.

Fish, at particular seasons, is very abundant, and some kind or other may always be had near Lerwick, when the state of the weather is such as to permit boats to go off in search of them. A good cod may be bought for 3d. or 4d. and haddocks at the rate of six for a penny. Mackerel begin to be caught about the middle of August, and continue on the coast for a month. They are large and well flavoured.

The other kinds of fish in common use, are ling, tusk, whittings, flounders, and the young coal fish called sillock. Towards the end of autumn, the latter are very delicious, and are much prized in the country. There are no real turbot in Zetland, but plenty of halibut, which the fishermen deem the greatest delicacy. Soles are very scarce, and are seldom ever seen, except when driven on shore during bad weather. A few salmon have been caught, but they are seldom sought after. There is a vast number of trout, both in the sea and in the lakes, some of which nearly equal the salmon in size, and exceed him in flavour. Besides these, there is a variety of shell fish, such as the crab, lobster, muscle, cockle, oyster, razor-fish, &c. The oysters are of a moderate size, very rich and fat, and are much esteemed by strangers. They are brought chiefly from the islands of Burra, and, after a carriage of six miles, seldom exceed 8d. or 10d. the hundred.

Of vegetables there is abundance in Lerwick, though no great variety in general use. Indeed, except by a few, horticulture is neither understood nor attended to.

Although provisions are thus comparatively low-priced, yet within a period of fifteen years, many articles have risen above one hundred per cent.; and in a country where money is scarce, they may be considered still to be sufficiently high.*

There are a few lodging houses, but no regular inns at Lerwick. This want has been often complained of, both by strangers and by the country gentlemen. A neat well regulated establishment of this kind, I have no doubt would succeed.

* The following statements shew the price of provisions at two former periods. " In the islands of *Shotland* there were beeves and sheep sold at a very reasonable rate; I bought for my own use, and the victualling the ship sent to *London*, three oxen for 3l. and at another time four oxen for 5l. which were fat, and about the bigness of the small sort of cattle we have in *England*: There were also fat sheep sold for 2s. and 2s. 6d. per sheep." *Smith's England Improvement revised*, p. 255. 1633.

In 1750, beef, pork and mutton sold in *Zetland* at $\frac{3}{4}$ d. a pound, and butter at $2\frac{1}{4}$ d., a goose for 5d., and a fowl for 2d. *Extracts from a Survey of Orkney and Zetland*, in the possession of the Antiquarian Society of Edinburgh.

As there is no magistracy in Lerwick, there is no police to regulate and superintend the economy of the town. Each individual lays out his ground as best suits his inclination or his interest, and sometimes to the inconvenience of others. The right honourable lord Dundas is the lord-lieutenant of the county of Orkney and Zetland. There is a sheriff, an admiralty, and a commissary court at Lerwick; and, lately, justices of the peace have been appointed.

Lerwick contains at present about sixteen hundred inhabitants, exclusive of two hundred in the country part of the parish. They may be divided into three classes: In the first class may be included gentlemen of landed property, professional gentlemen, civil officers of the crown, and the more opulent merchants. In the second class may be arranged, the artizans and inferior shopkeepers; and in the third class, the labouring poor.

The first class has generally a considerable accession to its number during war, from resident officers, both of the navy and army. The

manners of the country gentry are exactly the same as those of this first class in the town, and the general observations applicable to them, may be extended with equal justice to the others.

The Zetland gentlemen are, in general, intelligent and well informed. Many of them have received a liberal education at some of the Scotch universities, and although fond of the gaieties of a more southern latitude, they are all much attached to their native country. They are extremely loyal, and feel a lively interest in the glory of the British nation. From the frequency of their visits to the larger towns in Scotland and England, and the opportunities which Zetland itself affords them, of occasionally becoming familiarly acquainted with people from distant countries, they soon acquire a more extensive and accurate knowledge of mankind, than many others who boast of being daily in possession of superior advantages.

The ladies are very amiable in their dispositions, and are extremely fond of improvement.

They devote a considerable portion of their time to reading, and as they are almost all accustomed, early, to be separated from their brothers or other relations, who leave the country on account of their education, or with a view to business, most of them practise letter-writing, in which several of them excel. This circumstance, while it tends much to improve their minds and correct their taste, contributes also, to engraft on their temper, a degree of tenderness and affection, which is highly interesting. Some are educated at home, and acquire afterwards, at Edinburgh, those fashionable embellishments which shed a lustre on their character; but their more substantial, and truly feminine attractions, of delicacy of manner, and purity of mind, are derived from early culture, and simplicity of life, in their native land.

In their intercourse with strangers, the Zetland gentry are polite and modest; and if the former possess any information beyond what they do themselves, they readily admit, and generally over-rate it. But while they are thus disposed to pay respect to real abilities, few

people sooner discover the ground on which a claim to superiority over them is founded; or can more accurately appreciate the value of such pretensions. Most strangers who have visited Zetland, have been highly pleased with its society, have felt regret at leaving it, and have borne public testimony to the kindness and civility of its inhabitants.

The Lerwegians are naturally hospitable. I never knew an instance of a stranger of agreeable manners, and respectable character, who was not well received by them; and who was not amply indemnified, by their kindness, for the want of public inns. In the practice of hospitality, however, they sometimes appear to be capricious, which is often more to be ascribed to the penury of the markets, than to their inclination. Their entertainments are frequent and elegant; and an invitation to dinner in the winter time is understood to imply the sequence of tea and supper.

The ancient, or as some call it, the savage virtue of hospitality, is carried to a much greater length in the country than in the town;

for a traveller may look upon every house as his own, and, with a very few exceptions, he will not be disappointed if he do so. The clergy form a respectable part of the country gentry, and are proverbially hospitable. Like their brethren to the southward, they are men of education, and fond of literature. As the church in Scotland cannot be understood to hold out the prospect of much worldly wealth to its votaries, they are in general moderate in their desires, and temperate in their enjoyments. Having no claims on their situations beyond their own natural lives, they look upon all mankind as children of the same family, journeying on to the same common home; and among no set of men will an intelligent stranger discover more genuine hospitality, and urbanity of manners, than among the ministers of the presbyterian faith.

The gentlemen of Lerwick have card clubs, which meet once a-week during the winter months, and at which the country gentlemen and strangers are considered as honorary members. The conversation, on such occasions, frequently turns on political subjects, which

engross a great share of their attention. This is not surprising, when we reflect on the irregularity of intelligence from the southward, and the scope which that gives for hope and speculation. There is a packet between Lerwick and Aberdeen, and which ought to leave the latter place the first Sunday of every month, December and January excepted; but the sum allowed by Government is too small, of itself, to cover the expence of a packet; and the company which contracts to carry the mail is therefore under the necessity of making it, occasionally, but a secondary consideration. The gentlemen console themselves for the want of regular intelligence, in the belief, that they hear facts only, and that they are spared the unnecessary trouble of reading the fables of the day, without recollecting, that the very next arrival, perhaps, may demonstrate their supposed truths to be false; and they are perfect strangers to the political festivals which are derived from the daily fluctuation of public opinion.

There are also now and then subscription balls in Lerwick, but they are much less fre-

quent than they might be, as they afford an agreeable species of amusement, and the only public one in which the ladies can participate.

Winter is the season of general mirth and festivity in Zetland, although the wish to visit each other is greatly interrupted by the difficulties which are attendant on travelling. As there are no regular roads, a journey over land is a serious undertaking; for the ground is wet and unequal, and the ponies are low. The best mode of travelling is by water, in a six-oared boat, and this is the conveyance most generally practised.

With all their good qualities, the Zetland gentry have among them, those little jealousies, and occasionally display that party-spirit, which appear to be the inseparable attendants of all small societies, especially where the views of the individuals composing them, are nearly the same. It is hardly possible to meet with the same liberality of sentiment, in a community where there exists, not only a similarity, but even a unity of pursuit, as in one where the individuals are engaged in opposite views. In

the former case, success depends on talent and superior address, which, under these circumstances, seldom fail to confer on their possessors the envy and jealousy of their less favoured rivals. In the latter case, little rivalry exists, and general success is by no means incompatible with individual aggrandisement. Where the situation is favourable for their development, the natives of the Zetland islands yield to none of their fellow-citizens, in a just sense of honour and integrity of principle.

The second class of inhabitants of Lerwick is composed, in general, of an industrious and sober set of individuals. About fifteen years ago, without corporation right of any kind, the different tradesmen agreed to constitute themselves into a society, which they called the "*Lerwick United Trades Society*." A fund was soon raised by donations and entry-money, and supported by quarterly contributions. The institution had for its object, the relief of their widows, and of infirm and unfortunate artizans. To extend its benefit, however, as much as possible, a permission to enter was afterwards given to every person, under forty years of age,

who chose to become a member; and it was resolved, that the fund should not be touched before the expiration of a certain specified period of time. As the fund increased the entry-money was raised; and the beneficial effects of the institution have been sensibly felt, not only in ameliorating their temporal concerns, but in improving their moral character.

The society has a president and managers, who meet occasionally for the discussion of its business, and there is an annual meeting at which the whole members assemble. On this occasion they are dressed in a particular uniform, and walk in procession through the town.

I shall refer any observations on the third class of inhabitants, to the next chapter, on the character of the peasantry.

It is an observation frequently made by the Zetland gentry, that the state of society has greatly degenerated among them within the last twenty years. The fact, I believe, is obvious and incontrovertible, but the change has been pro-

duced by causes which they could neither foresee nor prevent, and, in the contemplation of which, they appear to have overlooked entirely, the old but just observation, that we change with the times.

About the period alluded to, and for some time before, the gentlemen of landed property lived at home, and managed their estates themselves. Wealth was then less generally diffused, and intercourse with other countries less frequent than at present. These circumstances conspired to keep up in the minds of many, a respect for those distinctions of rank which their fathers acknowledged, and which were seldom infringed. But these worthies are now sleeping in their graves, and some of their successors are spending, in more genial climes, the fruits of their industry. The late and the present war have introduced more wealth into the country, and with it a spirit of enterprize; commerce has extended the relations of all, and a constant communication with other countries has tended to destroy an acknowledgment of any superiority but that which merit and worth confer. Hence this general

intercourse brings the different ranks more on a level, and each person contributes to that very deterioration of society which he so feelingly deploras.

——— Video meliora, proboque ;
Deteriora sequor.

CHAPTER X.

OF THE MANNERS AND CHARACTER OF THE
ZETLAND PEASANTRY.

ALTHOUGH the leading points in the character of the Zetland peasantry be the same, there are shades of differences among the people of the different parishes, in accent, dress, and manners, as marked as in the counties of Scotland and England. Notwithstanding the circumscribed nature of the country, the people of one district seldom mix with that of another, and although men from many different parishes meet in summer at the fishing stations, their intercourse is seldom very intimate. The inhabitants of the island of Unst have been long remarked for gaiety and fondness for dress, those of Northmaven, Sansting and Walls, for sobriety and decorum, and the people of Coningsburgh for rudeness and vulgarity. The people of the

country part of the parish of Lerwick, though not more than a mile distant from the town, and in the practice of daily communication with it, still retain the primitive habits of their ancestors.

The cottages are nearly the same in every parish. The walls are imperfectly built with stone and clay, and the wood of the roof is first covered with thin turf called *pones* or *flaas*, and afterwards thatched with straw. The house consists of two apartments, with only one fire place, on the middle of the floor of the largest room; and a hole in the roof is the only outlet for the smoke. The practice of building regular chimnies is beginning to be more general than formerly.

In the dress of the Zetland peasants there is little which can be considered as peculiar. When at home, and engaged in agricultural occupations, both men and women wear the manufacture of their country; the former using the wadmill or clath, and the latter different kinds of coarse stuffs; and, instead of linen, they employ a species of flannel made from the

wool of the sheep. The men make a kind of shoes or sandals of the untanned skins of cattle or seals, which are called *rivlins*; they are light, and warm, and wear a long time. They also use tanned sheep skin as a fishing dress. When at church, or at a festival, they are as decently clothed as any peasantry in Britain.

The food of the lower classes of people in Zetland; consists chiefly of bread, milk, and fish. Some of them have small quantities of mutton and pork, but few can afford beef. They seldom salt their meat, but either smoke it in the house, or dry it in the air. When preserved in this latter manner, it is known by the name of *vivda*. Most houses are provided with small huts, placed on airy situations, and penetrated with several chinks, for the purpose of drying their fish in. Such a hut is called a *skio*. Besides drying their fish in this manner, it is frequently placed under circumstances which favour the bringing on a certain degree of putrefaction, in which state it is esteemed as a delicacy by all classes of people. This may appear to be a somewhat singular taste, but it is not a more extraordinary one than that

which prefers some species of game in a putrid state.

Their chief drink, in the summer time, is *bland*,* a liquor which has been long celebrated. It is the serum of milk after it has been churned, and is an agreeable beverage in every state. I have seen it after it had been preserved for a twelvemonth, and it was then perfectly transparent, and as strongly acid as lemon juice, which it very much resembled in taste. The brewing of ale was formerly very general in every parish, but since the imposition of the heavy duties on malt, the practice has been discontinued. It is believed by many, that the Picts possessed the art of distilling a spirit from heather, but which has been lost in the changes to which all their institutions and customs in this country have been subjected. Whether this be really a fact or not, I am unable to determine; but, not more than one

* The Icelanders use a drink called *syra*, which is sour whey, kept in casks and left to ferment, and which is not thought fit for use, until it is a year old. *Blanda* is a liquor made of water, to which a twelfth part of *syra* is added. *Von Troil's Letters*, p. 107.

hundred years ago, it was customary, in the brewing of ale, to employ the tops of the heather as a kind of hops ; and it is very probable, that this circumstance gave rise to the tradition which I have mentioned.

Both the men and women who compose the lower classes of people in Zetland, are, generally speaking, well proportioned, of fair complexions, and an agreeable expression of countenance. The men are stout and muscular, capable of enduring great degrees of fatigue, and of a very enterprising spirit. Many of the women are handsome, and possessed of much feminine softness of manner. Individuals of both sexes often live to a great age, and the men seem scarcely to undergo any perceptible change, between the age of thirty-five and fifty. Instances of deformity among them are very rare, and yet it has never been the practice, until lately, for men-midwives to officiate at their introduction into the world. Within a few years indeed, this odious and unnatural substitution has become more frequent, and midwifery is practised, not only by regular surgeons, but also by those who study surgery

as an amusement. In difficult cases, the interposition of a skilful surgeon is no doubt highly necessary; but it is well known, that in ninety-nine instances in the hundred, such an interposition is not required, and an officious interference only impedes what nature would safely accomplish. Necessity alone can justify a practice which is degrading to manhood, and at which delicacy must ever revolt.

The young of both sexes pay great attention to the growth of their hair, which is esteemed in proportion to its length. The modern refinement on the Spartan simplicity of the female costume, which reduced the head to a masculine crop, has not yet found admission among the simple maidens of Zetland. Their necks are still covered with those native ornaments which graced the fair bosom of their common mother, when

She, as with a veil down to the slender waist,
Her unadorned golden tresses wore
Dishevell'd, but in wanton ringlets wav'd.

Most strangers, on visiting Zetland, have been struck with the curiosity and acuteness of

the peasantry ; but their curiosity has seldom the acquisition of useful knowledge in view. Many indeed inquire anxiously concerning political events ; and as there are few families which have not some relations in the navy, the subject of peace or war is generally the first question. They listen with great attention to every species of tale, particularly such as relate to maritime affairs, and several individuals are known and celebrated for the number which they can relate. This is a species of amusement very generally resorted to in the winter evenings, when the campaigns of the soldier, and the battles of the sailor, are detailed to the listening audience, and carefully treasured up in the memory of the rising generation. The acuteness displayed in their character, arises from different causes, such as the annual assembling in numbers at the different fishing stations, which excites emulation, and gives scope to ingenuity ; their frequent intercourse by traffic with strangers ; and a necessary degree of attention to understand the complicated system by which their farms are held and their rents paid. They are naturally lively in their dis-

position, possessed of considerable humour, and fond of amusement.

Many of the Zetlanders have excelled in the mechanical arts, by the mere force of natural genius, without ever having been out of the country, or witnessed the performance of any individuals more expert than themselves. There is a blacksmith at present at Lerwick, who has made an excellent clock to himself, which keeps time with perfect regularity; and he makes springs to watches, as highly tempered and as well polished as any in the kingdom. Indeed he is particularly versant in the tempering of metals. I never saw this man examine a machine, however intricate in its construction, for the first time, that he did not very soon discover the object and the uses of its various parts; and if in any way deficient, could, with admirable precision, suggest the improvement. Native goldsmiths, cabinet-makers, and ship carpenters, have also appeared among them; and there are in the country various specimens of their respective skill.

The Zetland tenants have a decided dislike to enter on written agreements of any kind, and if a person persuade them to a line of conduct, obviously to their advantage, they are impressed with a belief that it is done from an interested motive, and they seldom follow the advice which they receive. A similar temper of mind forms a predominant feature in the character of common sailors, especially those in the navy. This want of confidence in their superiors may be ascribed, in part, to ignorance, but a considerable share of it may also be referred to the previous experience of deception. The Zetland *udallers* have, no doubt, on some occasions, been compelled to part with their small inheritances, without ever having been convinced that they had received for them a fair indemnification; and when seamen are wanted for the navy, neither promises nor protections are sufficiently respected. Ingratitude, although often practised by them, is less a feeling of the mind than a belief in the impossibility of repaying a particular obligation. Still it has a disagreeable effect, and it sometimes gives rise to habits of evasion, and a want of adherence to veracity.

To their equals and inferiors they are condescending and familiar, and, in addressing them, generally use the pronoun *thou* and *thee*. They rarely make use of the second person plural, except when they feel reserve, or wish to shew respect. To their superiors they are often abject and submissive; but this unbecoming demeanour does not arise altogether, as has been generally supposed, from an assumed superiority over them, by those above them in rank, but from a belief in their own minds, that such a behaviour is the most conciliating, and the most likely to contribute to the attainment of the ends they have in view. When this idea does not operate, they can be both sullen and reserved.

The men are in general indolent, and adverse to any steady exertion. The women, on the contrary, are active and industrious. So very inactive are the former, that it is difficult to get them to labour in the winter time, even when the wages are high. This indolence of disposition does not proceed either from contentment with their situation, or from a consciousness that they stand in no need of any such

assistance ; on the contrary, they are generally dissatisfied with their lot, and many of them are imposing in their demands, wherever they can practise imposition with impunity ; and if money is to be acquired suddenly, by a temporary, and even dangerous enterprize, none are more ready to engage in it.

Much of this suspicion, indolence, and servility is, no doubt, to be ascribed to the immemorial operation of feudalism in Zetland. The inhabitants of this country were long oppressed by the earls and the agents of Government ; and although milder times, and a more equitable system of management have succeeded, yet the peasants are still, to a certain degree, at the mercy of their superiors. A tenant at *will*, as it is termed, or one who has a lease but for one year, whether he be in Zetland or in England, is at best but in a state of vassalage, and continually oscillates between the happiness and misery of having a mild or a harsh master. The impression on his mind, that a momentary fit of ill-nature or caprice may deprive him of local advantages, which it has cost him years to obtain, and the irritation of mind

consequent on that conviction, tend to sour the temper, and give rise to unsettled habits of action. Accustomed to limit his views of happiness to a short duration, he acquires the love of temporary enjoyment, and seizes with unreflecting avidity whatever most readily contributes to its attainment.

This indolence of temper is accompanied by, and perhaps gives rise to convivial habits, to which they are much addicted. The winter, as far as their means permit, is spent in mirth and festivity. They are both social and hospitable, and never fail to invite the stranger to share with them the passing morsel. Indeed, it is easy to perceive that the practice of this patriarchal virtue is highly congenial to their minds; for, if they cannot entertain their friends, they are earnest and sincere in their apologies for their inability to do so. Sir Robert Sibbald long ago bore testimony to the truth of this observation. "Their hospitality here must not be pretermitted, wherein a common farmer doth farr exceed the gentlemen of other places."*

* Description of the Isles of Zetland, p. 23.

The men are fond of spirits and snuff, and the women of tea; but instances of intoxication are very infrequent. The quantity of tea consumed annually, by the lower classes of people in Zetland, is very great; and many of them would rather submit to want some of the necessaries of life, than be deprived of the regular use of this article of luxury. It is the inferior kinds of bohea tea which are used, and which seem to be the least pernicious variety of this herb.

Music is very generally cultivated, as an amusement, by the Zetlanders of all ranks, and some of them have, at different times, attained no inconsiderable degree of excellence in several of its departments. Many of both sexes have voices capable of great modulation, but they are seldom improved; and among the peasantry almost one in ten can play on the violin. There are still a few native airs to be met with in some parts of the country, which may be considered as peculiar, and very much resemble the wild and plaintive strain of the Norwegian music. Before violins were introduced, the musicians performed on an instru-

ment called a *gut*,* which appears to have had some similarity to a violin, but had only two strings of horse hair, and was played upon in the same manner as a violoncello.

Although the Scottish be the prevailing music of the country, the native musicians insensibly impart to it a character of their own, the smoothness and simplicity of which they seem to have derived from their Scandinavian ancestors, and which no intercourse with other countries has yet been able altogether to efface. Of those, however, who have had opportunities of cultivating, scientifically, the stile of the Scottish reel, a few have displayed a taste and originality in composition, not inferior to the most celebrated musicians of Scotland.†

* A similar instrument appears to be in use at present in Iceland. "I observed two kinds of musical instruments in Iceland, one called *laang spil*, with six brass strings; the other called *fidla*, with two strings made of horse's hair: both are played by a bow." *Von Troil's Letters on Iceland*, p. 92.

† That beautiful tune called *Lord Kellie's Reel*, is the production of a Zetland peasant.

Dancing is a favourite amusement with the youth of both sexes, but they display neither the grace nor the agility of the Highlanders. The frequency of meeting for this purpose has been much abridged, since the late severe restrictions on the brewing of ale, and the abolition of smuggling. The former has been felt as a serious inconvenience, but the latter has had a beneficial effect on their moral character.

The peasantry of Zetland are not more illiterate than the same class of society in the northern parts of Scotland. They are naturally sagacious, and anxious to improve themselves. Until lately there were but few parish schools in the country, but they are now introduced into every parish, and scholars of both sexes attend with a degree of zeal that does them the highest credit. Besides being able to teach them to read and write, most of the schoolmasters understand arithmetic, and a few are acquainted even with the elementary parts of navigation. To attain a knowledge of this latter branch is the chief wish of all the young men, and few of them make even a single voyage to Greenland, who do not, on their

return, desire to enter on the study of navigation.

The whole of the people are respectfully observant of the public duties of religion, and I believe, may be said to be unaffectedly pious. They were formerly very much attached to their ministers, between whom and themselves there subsisted a degree of parental and filial affection. But the recent innovations of the missionaries have destroyed much of this harmony, and fanaticism and contempt for the established presbyterian church, are now beginning to be openly avowed, and sedulously practised by many. It is truly amusing to observe the progress of this spiritual revolution, and to witness the folly and inconsistency into which its votaries are betrayed by the extravagance of their leaders. Several of the latter are common fishermen, and, bearing the names of some of the apostles, they fancy themselves equally holy and pure, and believe that they are destined to work a similar change on the minds of mankind.

Both sexes are susceptible of high degrees of affection and constancy. Although from their modes of life, the freest intercourse prevails, yet in the country parishes, deviations from chastity are by no means frequent. It is worthy of remark, that since the church has laid aside somewhat of the severity which formerly characterized it, irregularities of this kind have become much less common. Some years ago, when it was the practice to punish those guilty of them with public and repeated exposure, their occurrence was incessant. The session books of the different parishes abound in histories of this kind. The fair frail delinquents, for a single discovered imprudence, instead of being secretly reprov'd, in the mild spirit of Christian gentleness, and having their imperfections shaded with the veil of forgetfulness, were indiscriminately stigmatized, and repeatedly subjected to the sneers of a whole congregation. Repentance under such circumstances could be but temporary, for the kindred emotions of a regret for lost innocence, and a returning sense of virtue, were stifled by the corroding reflection, that unfeeling austerity,

and mistaken zeal, had forever destroyed the hope of future reputation.

When a courtship is somewhat advanced, the lover pays a visit to his mistress on Saturday night, and generally remains a day or two in the house. This is considered as an open avowal of his intentions, and it is occasionally repeated until the marriage ceremony gives to his arms the object of his choice. The weddings generally take place in the winter time, and as the guests come from a distance, the entertainment sometimes lasts for several days in succession. It is a common practice for several young men to disguise themselves, and visit the company thus assembled. Such a party is known by the appellation of *Guizards*. Their faces are masked, and their bodies covered with dresses made of straw, ornamented with a profusion of ribbands. Each of them has a particular character to support, but none speak, so that the performance is a kind of pantomimical masquerade. The person who directs their movements is called the *Skudler*, and he is always the best dressed of the party. They are kindly received, and dance with every person

present, in succession. As the accommodation of the Zetland cottar houses is by no means great, the mode of lodging the company during the night is sufficiently simple, and I believe peculiar. A quantity of straw and some blankets are spread over the floor of the barn, and all lie down and repose together, like the children of the same family.

Conjugal infidelity is comparatively rare. Parents are much attached to their children, and the latter, although frequently compelled to leave them, yet, on some occasions, devote their whole lives to their protection and support.

The introduction of the straw manufactory into Lerwick, although it has furnished occupation to many individuals, who were otherwise but little employed, has tended much to corrupt the morals of the lower classes of people, not only in that town, but over the whole country. The assemblage, in a small place, of a number of young girls, unrestrained by the example, and removed from the pro-

tecting care of their parents, and suddenly acquiring comparative wealth, soon lays the foundation of habits of vice and extravagance. As they come from every different parish, they carry back with them, on their return, more or less of the sentiments and manners which they have acquired, and thus gradually weaken respect for decorum, and undermine in others, the principles of virtue and morality.

Christmas day, old style, called *Yule day*, is held in great veneration by all the peasantry of Zetland. No individual will then engage in any kind of labour, and if a drop of spirits can be obtained by any sacrifice, it must be had to hail the morn of that happy day. Long before day light, the fiddlers present themselves at the doors of the houses, playing a tune called the *day-dawn*, the interesting association of which thrills every soul with delight.

Spontaneous joys, where nature has its play,
The soul adopts, and owns their first born sway;
Lightly they frolic o'er the vacant mind,
Unenvied, unmolested, unconfm'd.

This tune has long been consecrated to Yule day, and is never played on any other occasion. The first day of the new year, old style, is also much respected, but not in so enthusiastic a manner as the former.

Accustomed from infancy to be much engaged in boats and in fishing, the Zetlander becomes familiar with the dangers of the sea, and even acquires a fondness for scenes of that kind. A sea-faring life, therefore, is the most frequent object of his choice, and it is universally admitted that no country produces better seamen. During the last and former wars, great numbers entered voluntarily into the navy, for which they early evinced a strong partiality, but since a rigorous impress has been established at Lerwick, they have lost their ardour for the service, and subject themselves to the most distressing privations to avoid the chance of being forced into it. Between 1793 and 1801 the late Mr Walter Scott, regulating officer, enlisted eleven hundred men for the navy; and the whole population of Zetland did not much exceed twenty-two thousand souls. Upwards of three thousand natives of this coun-

try are at present in the navy, a proportion exceeding that of the most populous maritime county in Britain. About six hundred men go annually to Greenland; and as those who engage for this voyage are conceived to be complete seamen, they are looked upon as fair game by the impress officers, and are hunted down with remorseless perseverance. Some have perished in the rocks, in their attempts to escape from this dreaded severity, and others have had their health irrecoverably ruined by watching and exposure during inclement weather. The panic is not confined to the young and the active, its sympathetic influence extends even to old men and boys, and the appearance of a boat resembling that in the impress service, is taken as the signal for a general flight. And not without reason, for often while celebrating with innocent and unsuspecting mirth, the wedding of some youthful pair, or engaged in the annual amusements of a winter night, the harmony of the scene has been rudely terminated by the sudden appearance of a press-gang, and their victims dragged, amidst tears and lamentations, to the general rendezvous.

While considerable sums of money are yearly brought into the country by the Greenland trade, the commercial people of Lerwick are among the chief gainers by it. They supply the sailors with whatever they need, and are the agents for their pay. In their efforts to obtain men for the ships which they supply, they frequently disappoint the landholders in their fishing schemes, and as the prosecution of the one is deemed to be incompatible with the other, this opposition of interest gives rise to endless jealousies between them. The merchants of Lerwick are constantly complaining of a disinclination on the part of the heritors to unite with them in petitioning Government to relieve their country from this vexatious oppression, and to offer to contribute a regular quota of men, proportioned to their population, in its stead. The heritors, on the other hand, urge, that regular fishing tenants are exempted, both by custom and law, from impress; that the Greenland trade is prejudicial to the morals of the people, and they wish to put a termination to so injurious a system.

As every tenant is a fisher, and some of them perhaps at a former, though distant period, to relieve a pressing necessity, have made a voyage to Greenland, or gone to Leith in a trading sloop, the whole male population of Zetland may, abstractedly, be deemed seamen. But although these circumstances, in the eye of reason and experience, can never constitute a man a seaman, nor render him liable to be impressed, yet they are often considered sufficient qualifications in the eye of a regulating officer. To swell his list of volunteers,* and to appear to have been active in his situation, are the grand points which he has in view; and to extenuate any acts of harshness or severity of which he may have been guilty, he pleads the imperious nature of his duty.

* The mode of procuring volunteers is rather extraordinary. Immediately after a man has been impressed, he is either sent on board of a ship, or shut up in the rendezvous, and promises, threats, and privations of every kind, practised to induce him to enter. He resists for a time in the hope of being released, from a conviction that he is not a seaman, but seeing his vexations daily increase, and no prospect of a termination to them, he reluctantly consents that his name shall be enrolled among the number of *volunteers* for the navy.

Of those who go to Greenland annually, many are tenants who have no other means of paying the high rent of their farms. Such is the state of most of the farmers in Tingwall and Whiteness. The others are unmarried men, the sons of regular tenants, who surely have as fair a claim to personal freedom as any citizens in the British empire. It is peculiarly hard, that in consequence of having selected the line of life, on which the political superiority of their country depends, they should be subjected to unremitting persecution, both by the landholders and the impress officers. I am not possessed of the morbid sensibility that would deny the indispensable necessity of impressing men in a country purely maritime, but let "mercy season justice." Some individuals are dissipated and idle, and live but for themselves; others are the fathers of helpless families, and the only support of declining age; but when all are indiscriminately hurried on board of a tender, carried to the Nore, and dispersed over the fleet, the claims of justice arrive too late for their restoration to their beggared wives and children. They have already sailed to the West or to the East Indies, and the first intel-

ligence, perhaps, communicates an account of their death. I have witnessed, on many occasions, instances of oppression and injustice connected with the impressing of men in Zetland, to which nothing but the remote situation of the country, and the difficulty of obtaining redress, could have given even a momentary countenance.

The population of Orkney is greater than that of Zetland, her commerce is more extensive, and she employs in her trade, twice the number of sailors. The habits and modes of life of the inhabitants of both, are nearly the same, but Orkney is not scourged with an impress establishment. The farmers and fishers go annually to Greenland, and, when once landed, prosecute in peace their customary occupations during the remaining months of the year. In every war, Zetland has sent twice the number of men to the navy that Orkney has done, and has paid her just proportion of every public burden. Why then should so favourable an indulgence be extended to Orkney, and Zetland be excluded from any share in its benefits? Nothing but a voice in the great

council of national representation can alleviate the hardships to which the lower classes of people in this country are too often subjected.

The peasantry of Zetland are very superstitious, and they firmly believe in necromancy. An extraordinary instance of this kind occurred at Lerwick in 1807; and as the vision was said to have been seen by a man reputed to be both sober and sensible, some, even of the most sceptical, began to doubt whether they ought to question the fact.

On no subject are they more superstitious than in what relates to fishing. Some of the more skilful prophets can foretel, from the knots in the bottom boards of a boat, whether it will be lucky to fish or not; and whether it will be overset under sail, or be otherwise cast away; and boats have been rejected, and torn up, in consequence of such a prophecy. When they go to the fishing, they carefully avoid meeting any person, unless it be one who has long enjoyed the reputation of being lucky; nor, when the boat has been floated, is it deemed safe to turn it but with the sun. If a

man tread on the tongs in the morning, or be asked where he is going, he need not go to the fishing that day. When at sea, the fishermen employ a nomenclature peculiar to the occasion, and scarcely a single thing then retains its usual name. Most of their names are of Norwegian origin, for the Norway men were reported to have been successful fishers. Certain names must not be mentioned while they are setting their lines, especially the minister and the cat; and many others equally unmeaning.

Witchcraft is still believed by the peasantry to exist in Zetland; and some old women live by pretending to be witches, for no one ventures to refuse what they ask. About six years ago a man entered a prosecution in the sheriff-court at Lerwick, against a woman for witchcraft. He stated, that she uniformly assumed the form of a raven, and in that character killed his cattle, and prevented the milk of his cows from yielding butter. The late Mr Scott, then sheriff-substitute, permitted the case to come into court, and was at great pains to ex-

plain the folly, and even criminality, of such proceedings.

Nearly allied to witchcraft is a firm belief in the efficacy of alms. When a person is anxious for the accomplishment of any particular event, or considers himself in danger, he vows alms to some person, generally an old woman, who enjoys the reputation of being provided for in that manner; and if his wishes are realised, he scrupulously performs his vow. There are the ruins of an old church in the parish of Weesdale, called *Our Lady's Church*, which is supposed to possess a still greater influence in this respect than any living being. Many are the boats which are said to have arrived safe at land, in consequence of a promise to this effect, where death, without such an intervention, appeared inevitable. Several coins have been found, at different times, concealed in the walls of this Loretto of Zetland.

A belief in the existence of *Brownie*, the tutelary saint of husbandry, is beginning to be exploded; but the fairies or *trows* have still a

“local habitation and a name.” They occupy small stony hillocks or *knows*, and whenever they make an excursion abroad, are seen, mounted on bulrushes, riding in the air. If a person should happen to meet them, without having a Bible in his pocket, he is directed to draw a circle round him on the ground, and in God’s name forbid their nearer approach, after which they commonly disappear. They are said to be very mischievous, not only shooting cattle with their arrows, but even carrying human beings with them to the hills. Child-bed women are sometimes taken to nurse a prince; and although the appearance of the body remain at home, yet the immaterial part is removed. Such persons are observed to be very pale and absent; and it is generally some old woman who enjoys the faculty of bringing soul and body together.

A medical friend informed me, that a few years ago he was requested to visit a young woman, who was said to be dangerously ill. He accordingly went, and found her ill of a fever, caught in consequence of having accidentally fallen

asleep, in the middle of the day,* on the top of a little hill. The patient died, and her father, to the last moment of her life, obstinately persisted in declaring, that the fairies had taken possession of his daughter, and left an inanimate mass in her stead. Every effort to convince him of his mistake was ineffectual; and he even smiled at the folly of those who could themselves believe, and endeavour to persuade him of the truth of a contrary opinion. In cases where a person has been paralytically affected, and lost the use of an arm or a limb, the people believe that the fairies have taken away the sound member, and left a log in its place. They have even seared the affected limb with a hot iron, and, from the want of sensation in the part, have triumphantly boasted of the correctness of their opinion.

A belief in the existence of these supposed beings, acquires confirmation among the credulous, by the statements of those who are said to

* Noon and midnight are the periods of the day when the people consider themselves most liable to be seized upon by the fairies.

be the objects either of their attention or their malignity. They believe in it themselves, and every dream or reverie of the imagination is related as an actual occurrence. Some persons have the reputation of having resided many years among the fairies; pretend to be familiar with their habits; and even assert that they can recognize individuals among them at a distance.

Free-masonry is almost universally believed, by the lower classes of people in Zetland, to confer on the possessors of the secret, the rare faculty of detecting theft. Some curious occurrences of this kind have taken place, where a general threat of applying to a master-mason to discover the culprit, has been followed by restitution, during the night, of the things which had been stolen.

There are many other opinions and practices prevalent among them, founded in ignorance and credulity, the detail of which could neither be amusing nor instructive. But these errors have been gradually diminishing, both in number and magnitude, and will at last

vanish before the superior influence of mental improvement.

Notwithstanding the various sources of disgust to which the lower classes of people in Zetland are exposed, yet no individuals feel a stronger attachment to their native country, or a more ardent desire to revisit it.

Nescio, qua natale solum dulcedine cunctos ducit.

Whatever other difficulties he may have to surmount, or restraints to endure, the Zetlander has the uncontrolled liberty of ranging over every field. No penal prohibitions oppose his passage through extensive enclosures, which, in other countries, the selfish possessor deems fit to be pressed only, by his own sacred feet. The hills and the rocks are all his own, and there is something in the exuberant wildness that surrounds him, congenial to his own unlettered mind. It is, I apprehend, more to the possession of personal freedom in this respect, than to any fondness for the contemplation of particular scenery, or to the influence of any peculiar association, to which we ought to refer the

strong partiality which the inhabitants of poor countries feel for their native soil.

Something must, no doubt, be ascribed to the circumstance, that few events occur in such situations to distract the attention, or to weaken association, and that therefore the mind naturally clings with preference, to what it has made the object of its early choice. But even when succeeding intercourse with other countries has refined the taste, and given rise to new relations, this feeling retains its influence, and seems to be strong in proportion to the poverty of the country. The inhabitants of Norway and of Iceland are wonderfully attached to their native country, and the recent conflicts for national independence have displayed the strength of this feeling on the minds of the Tyrolese peasantry. While the Spainards were abandoning their plains to the enemy without a contest, and the Austrians were ceding to him their fortified cities, the patriotic Tyrolese hurled their native rocks on the heads of the impious invaders of their country, and consigned to merited destruction the tyrants of their liberties. "S'il etait un

principe général a établir, nul ne serait plus vrai que celui-ci, que les pays de plaine sont le siege de l'indolence et de l'esclavage ; et les montagnes la patrie de l'énergie et de la liberté."*

Upon the whole, the leading features in the character of the Zetland peasantry, appear to be formed decidedly, by the system of political economy which exists in the country,—where, in the efforts of native acuteness to bear up against and conform itself to feudal controul, we see shrewdness terminating in distrust ; a conciliatory deportment, arising from insincerity ; and industry checked by indefinite claims on its exertions. Yet amidst this assemblage of unamiable dispositions, we can discover a great deal of enterprise, and much social and natural affection ; and, when removed from the pressure of the external causes which repress their energies, few people more readily sympathize with, and assume independence of conduct and liberality of sentiment.

* Volney.

CHAPTER XI.

OF THE DISEASES MOST PREVALENT IN ZETLAND; AND SUCH AS APPEAR TO BE MODIFIED IN THEIR HABITS OF OCCURRENCE, BY ITS SITUATION OR CLIMATE.

ALTHOUGH there is no disease which can be said to be peculiar to Zetland, yet the insular situation of this country, and its climate, modify the character of several diseases, and tend to throw light on the pathology of others. It is not my intention to arrange them according to any particular classification, but to mention them in the order of their general importance.

Contagious Diseases.

All contagious diseases may be comprehended under the two great divisions of *primary* and *accidental* contagions. Under the first

division may be classed, small-pox, measles, hooping cough, lues venerea, and cow-pox. Under the second division, may be classed, typhus, scarlatina, dysentery, ophthalmia, &c.

The primary contagions, although sometimes affected by external powers, always produce a specific disease in the system, which exhibits the same symptoms and character now, as it did at the first appearance of the contagion, and cannot be produced by any known combination of circumstances. A few of the primary contagions, as small-pox, measles, and hooping cough, possess the singular and mysterious property of affecting persons only once in the course of their lives, although repeatedly exposed to their influence.

The accidental contagions, although they give rise to specific disease in the system, are produced, in the first instance, by a fortuitous combination of external circumstances, affect the human frame on every successive exposure to their influence; and while a single case of any of the primary contagions is sufficient to extend the disease to multitudes, the accidental

contagions depend for their propagation on the extent of morbid action generated, co-operating with heat, moisture, and impure air.

Each of these divisions not only admits of considerable varieties in the species which it contains, but also in the laws which regulate them, the investigation of which, in detail, is not necessary for the present purpose.

One great and leading fact in the history of the primary contagious diseases, as applied to Zetland, is, that they are uniformly imported at each successive time of their appearance; and the contagion having affected every system susceptible of its agency, ceases to operate, and appears to be actually destroyed. This has been ascertained beyond contradiction, and the fact has been recognized by the most careless observer. Typhus and dysentery, however, occur occasionally without any obvious cause, and are readily transferred from one part of the country to another.

There are no accurate documents, from which it can be ascertained when the small-

pox was first introduced into Zetland. Soon after Brand left the country, in 1700, the small-pox "seized upon many, both old and young, and was so universal, that upon one Lord's day there were ninety prayed for in the church of Lerwick, all sick of the same disease, whereas when we were there, a few weeks before, there was not one that we knew sick thereof. They say a gentleman's son in the country, who had lately gone from the south, and was under it when he came home, brought it with him, which very quickly spread among the people, the old as well as the young; and so sad have been the desolating effects thereof, that one told me who arrived here lately from the place, that he verily judgeth the third part of the people, in many of the isles, are dead thereof."*

The small-pox appeared again in 1720, and was so fatal, that it was distinguished by the appellation of *mortal pox*. In the island of Foula, the mortality was so great, that there were scarcely people left to bury the dead.

* Description of Orkney, Zetland, and Caithness, p. 72. and 73.

This disease appeared again in 1740, and afterwards in 1760. It was very fatal at this last period. Since 1760, the periods of occurrence have been very unequal. Previous to that time, the intercourse between Zetland and Scotland was by no means so frequent, as between the former and Holland and Hamburgh. It is a curious fact, that during four successive periods the small-pox appeared in Zetland every twenty years.*

Inoculation was introduced in 1761, but being deemed a hazardous undertaking, it was confined entirely to the higher ranks, or such as could afford to pay the operator for his time and attendance. Not more than ten or twelve persons were inoculated at this time.

* Several of the contagions seem to have their natural periods of rise and decline, and, when left to themselves, generally appear at regular intervals. This has been observed in the history of the plague, and it occurs also in that of the other contagions. This tendency to a periodical revolution, is observable also, in those great epidemics, which after a time become contagious, such as the yellow fever and influenza.

In 1769 the small-pox was again imported into Zetland, and in 1770 a surgeon still resident in the country, inoculated several hundred, chiefly of the lower classes. He relaxed from the hot regimen then generally practised, and substituted the antiphlogistic in its stead. He informed me, that the people of the lower classes were soon convinced of the great advantages to be derived from inoculation, and, resigning every prejudice to the voice of reason, both young and old presented themselves for inoculation, and experienced its benefits.

Since 1770, inoculation has been performed by a great number of native doctors, one of whom met with such unexampled success in his practice, that were I not able to bear testimony to its truth, I should myself be disposed to be sceptical on the subject. I shall give the history of this man's career, in the words of the Rev. Mr Dishington. "Inoculation is successfully practised, even by the common people; but, in particular, by a person whose name is John Williamson, who, from his various attainments and superior talents, is called *Johnny Notions* among his neighbours. Un-

assisted by education, and unfettered by the rules of art, he stands unrivalled in this business. Several thousands have been inoculated by him, and he has not lost a single patient."

"His success being remarkable, it may not be improper to take some notice of the method he pursues, in case it can furnish any useful hints to persons of the medical profession. He is careful in providing the best matter, and keeps it a long time before he puts it to use—sometimes seven or eight years; and, in order to lessen its virulence, he first dries it in peat-smoke, and then puts it under ground, covered with camphor. Though many physicians recommend fresh matter, this self-taught practitioner finds, from experience, that it always proves milder to the patient, when it has lost a considerable degree of its strength. He uses no lancet in performing the operation, but, by a small knife made by his own hands, he gently raises a very little of the outer skin of the arm, so that no blood follows; then puts in a very small quantity of the matter, which he immediately covers with the skin that had thus been raised. The only plaster that he uses, for heal-

ing the wound, is a bit of cabbage leaf. It is particularly remarkable, that there is not a single instance in his practice, where the infection has not taken place, and made its appearance at the usual time. He administers no medicines during the progress of the disease, nor does he use any previous preparation.*

The *measles* and *hooping cough* have also been unequivocally traced to importation, and generally recognized soon after that event took place. As the latter generates no perceptible matter, nor is attended with any eruption on the skin, it is less accurately known at its first

* Statistical Account of Mid and South Yell, vol. ii.

Mr Dishington's account appeared in 1792, and the operative part of Williamson's process appears to have been in strict conformity to the most approved plan which surgery has yet introduced. The most extraordinary part of the proceeding is, the purification of the matter, which, under his management, seems to resist the influence of powers which destroy the very contagion itself. Had every practitioner been as uniformly successful in the disease as he was, the small-pox might have been banished from the face of the earth, without injuring the system, or leaving any doubt as to the fact.

appearance, and has generally gained a considerable ascendancy before its presence has been well discovered. Both have appeared three times within the last thirty years; and the hooping cough has always been fatal to many children. Measles occurred in 1807, for the last time, and was imported from Scotland; but, although extremely malignant and fatal there, the disease was comparatively mild in Zetland.

Cow-pox was introduced into Zetland in 1804. At the very same time, a person labouring under the confluent small-pox was brought by a vessel to Lerwick, and a few ignorant individuals were anxious to propagate the latter; but the great majority of the inhabitants hailed the blessing which vaccination was calculated to confer, and had their children vaccinated. The contagion of the small-pox was soon circumscribed in its action, and speedily extinguished. Much to their credit and liberality, the people of Zetland of all ranks have patronized vaccination, and are anxious to have their children inoculated as soon as possible after birth. Owing to the disjointed state of the

country, it is difficult to keep up a regular supply of fresh matter from the living system, and, on this account, it is found necessary to procure it often from Aberdeen and Edinburgh.

From the apparent simplicity of the disease, almost every person believes himself competent to vaccinate, without ever reflecting on the nice and delicate discrimination necessary to ascertain, whether the matter be of a genuine or a spurious kind, or whether the affection induced by it be of a constitutional or a local nature. From an ignorance of these circumstances, or a want of a due degree of attention to them, it is to be apprehended that the small-pox may re-appear in the country, and affect some of those who now live in the belief of being secure from its attacks.

Scarlatina and the *influenza* have generally appeared in Zetland in the same year in which they prevailed in Scotland, but a bad species of epidemic catarrh sometimes breaks out in the country, without any such connection. Both appear to be decidedly contagious, as they propagate and extend themselves under

the most opposite states of weather and temperature, and continue long after the disappearance of those external causes which are supposed to lead to their production.

Typhus, or low nervous fever, occurs occasionally in every parish; but the contagion which produces this disease is constantly retained among the lower classes of people in Lerwick, and, when circumstances favour its action, the fever becomes very general, though seldom attended with fatal effects. Bad species of this fever are sometimes left by ships which occasionally touch at the islands, but they are generally circumscribed in their action.

Nervous Diseases.

Most of the affections which may be considered under this head occur in Zetland; but there are a few which present something peculiar in their appearance.

Idiopathic *mania* is a very rare occurrence among the natives of Zetland. The families in which this disease has appeared, have generally

come from another country. There are several instances, however, of fatuity.

Hypochondriasis is of very frequent occurrence among people of all classes. Several individuals have destroyed themselves, and many have been prevented when endeavouring to accomplish it. This affection can sometimes be observed to occur in a temperament purely melancholic; but it is often connected with, and dependant on *dyspepsia*. Stomach complaints are very general, particularly among the lower ranks of people. Indeed the organs of digestion among this latter class, appear often to labour under a great degree of torpor, for the common doses of medicines have scarcely any effect on them.

Hypochondriasis among the higher ranks of people may be referred to the dampness of the climate, the seclusion which this necessarily gives rise to, want of a sufficiently varied society, interruptions to regular intelligence from the southward, which frequently prevents the success of beneficial schemes, and irregularity of exercise. *Dyspepsia* among the lower or-

ders of people, is obviously occasioned by the use of unwholesome food, long fasting at sea, exposure to cold and moisture, inactivity, especially in the winter time, and inattention to cleanliness.

Apoplexy is by no means infrequent; but there is an obscure species of paralytic affection which seldom proceeds the length even of hemiplegia. It consists in a certain degree of numbness of the fingers of one hand, accompanied by an involuntary motion of the fingers and sometimes an inability to move readily the limb of the same side. It frequently remains stationary for a long time, and even appears to be less inconvenient at one time than at another. It occurs more frequently among men than women, though seldom among the former before they have attained the age of forty. This affection is sometimes accompanied by a degree of giddiness of the head, which seldom, however, proceeds the length of producing entire loss of motion or sensation in any organ. I have not observed, that the individuals affected with this complaint were more intemperate than others, or had any observable pe-

cularity in the configuration of the head or neck. It is frequently connected with general debility, and much exposure to cold.

Epilepsy was at one time very common in Zetland among the women; and it appeared to be communicated from one person to another, on some occasions, as if by sympathy. Numbers were seized with fits, almost at the same time, in the church during divine service, especially if the weather was warm, the minister a pathetic preacher, or the patient desirous of being thought possessed of a more than ordinary share of feeling. The individuals thus affected, cried aloud, beat themselves against the seats of the church, to the great annoyance of the more sedate part of the congregation.

That fits of real epilepsy occasionally occur, cannot be doubted, but that a great proportion of the cases alluded to were the effect either of imagination, sympathy, or affectation, I have every reason to believe. Rough treatment during a fit, or a threat to be more severe on the next attack, have completely cured many

of this affection, and a disapprobation of the practice, expressed by the missionaries, whom the people were anxious to please, have tended much to lessen its frequency. "Every one knows the effect of sympathy. The most trivial circumstance will sometimes throw an army, composed of the bravest and best disciplined troops, into the utmost confusion. Terror will spread from one to another, where there is not the shadow of danger. That persons may be affected by hearing the gospel, and may express their feelings by crying out, we think not unnatural, especially in some situations. One or two thus crying out, we think is sufficient to throw a number of people into confusion, and to produce convulsions, faintings, &c. But we should be no more disposed to ascribe this to the Spirit of God, than we were the case of a woman whom we witnessed some years ago thrown into the most violent agitation, and obliged to be carried home and put to bed, upon hearing a paper respecting the threatened invasion, read from the pulpit of an established church."*

* Scripture Magazine, No. V. a communication from Zetland.

Consumption.

Consumption is certainly of more frequent occurrence in Zetland at present, than it appears to have been at any former period. It is true, we are more disposed to observe and pay attention to events which take place in our own time, than to those of which others have informed us. But the late greater frequency of consumption may be referred to causes, the operation of which cannot be questioned.

Among an interesting part of society, the females of the first class, its occurrence may be referred to a change in dress and manners, of which a more frequent intercourse with the south has laid the foundation. The girls in Zetland, as in most remote country situations, are accustomed to be exposed like the youth of the other sex, until the age of eight or ten, to all the vicissitudes of their climate. This constant exposure, and the exertion consequent on it, enable them to resist impressions which, without such a concomitancy, would be hurtful. At the age, however, mentioned, they

suddenly change their habits and their dress. It is deemed fashionable and feminine to appear handsome, and to be lightly clothed. They confine themselves to the house, and, when they go abroad, seldom take care that their dress is sufficiently warm, to resist the cold and damp to which, particularly in the winter time, they are hourly exposed. Coughs and pulmonary inflammation generally follow such exposure. Many are at a distance from medical aid at the commencement of such attacks, and a removal to a more southern latitude is seldom had recourse to, until its influence is no longer useful.

It is vain to contend against the influence of natural powers, which are uniform and steady in their operation. The furs of the Canadian would be insufferable in the torrid zone, and the muslin robes of one who lives on the banks of the Ganges, prove an ineffectual shelter to the inhabitant of an icy region. It is the part of reason and experience, to endeavour to lessen the effects of that which they cannot remove; and so to appreciate the influence of the evils by which

we are beset, as to moderate their action, and render them comparatively harmless.

The sedentary habits, and the bending posture of the body, in which the girls who work in the straw manufactory are necessarily placed, have induced a tendency to breast complaints, in a class of individuals who were before but little subjected to them. Several of the girls have been obliged to relinquish the plaiting of straw, on account of being threatened with consumption; and those who before had a predisposition to this disease, have fallen victims to it more rapidly, in consequence of having engaged in this occupation. The first voyage to Greenland is very severe in its effects on young lads and old men. They are seldom provided with a sufficient stock of warm clothing, and being much exposed to intense cold, they contract coughs during the voyage, which frequently terminate in consumption.

Rheumatism.

This disease is, perhaps, of the most frequent occurrence of any. Indeed there is scarcely an

individual, who has attained the age of sixteen, who has not been affected by it. I have repeatedly seen severe instances of acute rheumatism, but the chronic species is the one which most generally appears. The dampness of the atmosphere, and the constantly wet state of the ground, render it impossible for people in the country parts of Zetland, to take much exercise in the open air, in the winter time, without being exposed to the most sedative effects of cold; and few are sufficiently attentive to guard against its influence. The fishermen are often subjected, alternately, to profuse perspiration and cold and moisture, and they suffer very much from this complaint,

Liver Complaints.

Jaundice frequently occurs in Zetland, and the people have among themselves many absurd and disgusting remedies for its cure; in the efficacy of which, however, they have the most unqualified belief.*

* Remedies however are not confined to jaundice. There is scarcely an affection, for the removal of which the more

Hepatitis is a very common affection in this country; but it is the chronic species that is most commonly met with; for the acute variety is generally confounded with rheumatism and pectoral complaints, and the disease is allowed to proceed a considerable length before the patient applies for medical assistance. An intelligent surgeon, who resides in a country parish, informed me, that he had known hepatitis affect a family consisting of seven or eight persons, in succession.

The obvious causes of this complaint in Zetland are, exposure to cold and moisture, and sudden alternations of heat and cold; these destroy the balance of circulation, and produce inflammation and its consequences. The opinion, that hepatitis is confined, for the most part, to a hot climate, is certainly erroneous.

skilful practitioners among them, have not what they deem an appropriate plan of treatment. Charms and magical incantations form no inconsiderable part of the native medicine of Zetland.

Cutaneous Diseases.

Of the cutaneous diseases there is a variety, but those which may be said to have something peculiar in them, are *elephantiasis* and *tinea capitis*.

Elephantiasis, known by the name of leprosy, was very frequent in Zetland about sixty years ago, but its occurrence since that time, has only been occasional, and at present scarcely an instance of it is to be met with. A native of Zetland, a few years ago, was received into the hospital of Edinburgh, labouring under true elephantiasis. I have seen obscure degrees of it in Zetland, where the face was bloated, the skin scaly and rough, and the voice slightly hoarse; but they did not terminate fatally, nor was the affection apparently communicated to others. The last instance I saw of it was in the person of a boy. His friends could assign no cause for its appearance, and said that it had come on spontaneously, and proceeded gradually. The disease had been stationary for some time before it fell under my observation.

Formerly, when this affection was very prevalent, the unfortunate individuals who were seized with it, were removed to small huts erected for the purpose, and there received a scanty allowance of provisions daily, until the disease put a period to their miserable existence. The parish of Walls and the island of Papa Stour, on the west side of the country, appear to have been among the places in which it raged with the greatest malignity. "The session records mention, that a day of public thanksgiving was observed in the ministry in the year 1742, when this disease (the leprosy) was almost extinguished."*

Elephantiasis was very prevalent in Iceland about thirty-seven years ago, when Von Troil was there, and it had existed in that country long before, as appears from several ancient documents. The milder forms of it were considered by the inhabitants as a species of bad scurvy, but in its more aggravated stages, it was called leprosy. Chevalier Bach says, that it was first brought to Europe by the Crusaders, in the

* Statistical Account of Walls and Sandness, vol. xx. p. 101.

twelfth century, and that it entirely disappeared both in England and in France in the seventeenth century. Neither this gentleman nor Von Troit conceive it to be generally contagious.* A similar opinion was entertained before, by Horrebow. "*Spedalskhed*, or the leprosy, another disease which many are infected with, is for the most part hereditary, but not commonly infectious."†

That this disease was, and may be infectious, cannot, I think, admit of a doubt. Salt and rancid meat, and a scarcity of vegetable matter, which might have concurred in Feroe, Iceland, or the Zetland islands, to give rise to scorbutic affections, were not likely to occur on the banks of the Nile, or in the more cultivated countries of Europe, where religion enjoined the use of a vegetable diet. And had this affection been produced by known external causes, its extension, at least, might have been easily prevented.

* Letters on Iceland.

† Natural History of Iceland, p. 105.

That elephantiasis prevailed formerly very generally in Zetland, has been incontrovertibly established; and all the inhabitants were impressed with a conviction of its infectious nature. No previous information alludes to the influence of any particular exciting causes, with the exception of the constant use of a fish diet, which some have considered as a principal cause of this disease; but fish has, on many succeeding occasions, constituted the chief part of the diet of the Zetland peasantry for years together, without being followed by any such effect.

It is probable that elephantiasis is an infectious disease *sui generis*, and that it was imported into Zetland. Being accompanied by a septic tendency in the system, its malignity would be readily increased by inattention to cleanliness, and the want of a sufficient quantity of fresh meat and proper vegetable aliment; and this appears probable, from the circumstance of its attacks being confined, almost entirely, to the lower classes of people. Ignorance of its nature would enhance the idea of horror connected with it, and, by withholding from its

victims the assistance which they required, contribute to increase its mortality; but a beneficial change in the manners and sentiments of those most obnoxious to its influence, has gradually tended to weaken the force of the infection producing it; and a perseverance in the same regimen may ultimately destroy it.

Tinea capitis, or scald-head, is also less frequent at present than formerly; which may be ascribed to a change in the mode of life of the lower classes of people. This affection appears to have been at one time very general in Fair-Isle. Sir Robert Sibbald says, that scald-head and baldness were so universally predominant at one time in this island, that it was a common saying among the Zetlanders, "that there is not a hair between the Fair-Isle men and heaven."*

The bulbous roots of the hair appear to be the seat of the acrid humour which maintains this complaint, and the more inveterate species of it are seldom cured without the complete

* Description of the Isles of Zetland.

loss of portions of hair, which are never again replaced: in some instances, the whole head has a white scaly appearance without any hair, but this occurs chiefly, when the complaint has continued from early youth. It is not uniformly infectious, for it is often confined exclusively to a single child in a family; but it appears to be hereditary, for the children of parents labouring under it are affected early in life, and it then assumes the same character as in the case of the parents.

The efficient causes of this disease have not been satisfactorily ascertained. Low diet, and inattention to cleanliness, tend to maintain it; and it is sometimes communicated by infection.

Sibbens.

A species of *sibbens*, or *sypilis insontium*, was introduced a few years ago into the parish of Walls, and extended itself to different individuals before its nature was known. It has; however, fortunately been nearly eradicated.

Gonorrhœa has been left occasionally by sailors belonging to different vessels, but, although often very improperly treated, and affecting the person a considerable time, I never knew the simple infection of the urethra terminate in lues.

Croup.

There is a striking peculiarity in the history of this disease, as applied to Zetland. As in other places, it occurs chiefly among children, and it exhibits the characteristic symptom of a wheezing noise during inspiration; but it is scarcely ever fatal. Although considerable degrees of fever, and difficult respiration, occur at the commencement, yet, as soon as the sound in the cough resembling crowing, and which has been understood to indicate a tendency to suffocation, has been fairly established, all danger is looked upon to be at an end. A surgeon who has practised in Zetland for forty years, and on the accuracy of whose observation I can rely with the utmost confidence, informed me, that during all that

time he had never seen an instance of genuine inflammatory croup.

As the reputed exciting causes of this disease, such as dampness, cold, and contiguity to the sea air, operate more or less in Zetland at every season of the year, and, although affecting the trachea, are inadequate to produce that modification of croup in this country which has long existed in Scotland and England, we are led to infer, that other external causes may contribute to its production,

The predisposing causes of croup are not better ascertained than the exciting causes. The opinion which assumes, that as there is an imperfect development of the larynx before the time of puberty, this organic debility predisposes children to the effects of this disease, and that the constitution becoming more vigorous, after that period of life, the individual is thereby secured against its attacks, appears to me to be equally unsatisfactory, and to derive no support from the analogy of the feminine voice of castrati.

Every member of the body, as well as that of the trachea, is less dense and vigorous before puberty than after it; but some, as the mucous membrane of the fauces, stomach and bowels, instead of being more severely affected by disease, in consequence of this greater susceptibility of impression, seem to derive from it, on some occasions, the power of more easy removal, and more effectual resistance.

That a great change takes place in the voice, especially in the male sex, at the age of puberty, is very obvious, but we are totally ignorant of the qualities of this change; whether it be a consequence of a difference of structure, or the acquisition of new properties. The male acquires a rougher tone of voice, and the female has the former keys mellowed and strengthened; but, surely, it requires as great flexibility and energy in the organs which form the voice, to pitch the high treble and tenor keys, as to utter a bass tone; and it is generally in the efforts of our male singers on the stage, to attain these finer keys, that we observe them become soonest exhausted. The astonishing powers of voice displayed by some females, and

Italian *castrati*, although neither of them can utter a bass tone, indicate a larynx possessed of the greatest organic energy, and of the most perfect construction.

Scrophula.

Scrophula is of frequent occurrence in Zetland, in all its varieties, and under the most aggravated forms; but I have never been able to trace it, but as connected with an hereditary taint in the system.

Cancer.

Both scitrus and cancer, especially cancer of the under lip, are very common in Zetland. The latter variety of the disease appears to be long purely local, and has no connection with a scrophulous taint in the system.

Intermittent Fever.

Intermittent fever has never been known to be produced in Zetland, nor even to have its paroxysms aggravated in individuals labouring

under it, by a removal to this country. There cannot be a more satisfactory proof of the insufficiency of cold and moisture, singly, to produce this disease.

It has been thought, that the principle of astringency which exists in moss-earth, has some influence in preventing the evolution, or counteracting the effect of the matter, which is supposed to be concerned in the production of intermittent fever. In every inhabited district in Zetland, there is more or less of this species of earth; and could its presence be ascertained to operate in the manner stated, it would enable us to advance a step farther in the pathology of this interesting disease,

CHAPTER XII.

DIVISION OF ZETLAND INTO PARISHES, AND
STATE OF ITS POPULATION.

SECTION I.

Of the different Parishes.

By a reference to the map it will appear, that the three principal islands run nearly from south-west to north-east, and that, with the exception of a few in Yell Sound, all the other islands lie on the east or west side of this range. The following are the names of the principal islands :

Mainland,
Yell,
Unst.

Islands on the East Side of Mainland.

Mousa,	Hascussay,
Bressa,	Fetlar,
Noss,	Uyea,
Whalsey,	Linga,
Linga,	Balta,
Skerries, three islands.	

Islands on the West Side of Mainland.

Fair-Isle,	Hevra,
St Ninian's Isle, pen- insula, by a sandy beach,	Hoy,
Hevra,	Vaila,
Burras, two islands,	Foula,
Trondra,	Papa-Stour,
Hildesay,	Vementry,
Chenies,	Papa-Little,
Oxna,	Mukle Røe,
Papa,	Linga,
Langa,	Uyea, peninsula, by a sandy beach.

Islands in Yell Sound.

Fish-holm,	Gluss-Isle,
Samfrey,	Foram, peninsula, by
Bigga,	a sandy beach,
Unaree,	Pund, near Lunna,
Brother-Isle,	peninsula by a san-
Little Roe,	dy beach.
Lamma,	

The islands of Zetland are divided into twenty-nine parishes, which form thirteen ministries. In enumerating the ministries, I shall take them in the order in which they occur from south to north, beginning at the south end of the country.

I. *Ministry of Dunrossness.* This is one of the most extensive ministries in the country. It includes the parishes of Dunrossness, Sandwich and Coningsburgh. A line drawn from the north-east part of Coningsburgh, and passing directly west, would form the peninsula which compose them, and which is about sixteen miles long.

Formerly these parishes constituted separate clerical charges, and there are still the remains of several churches. At present there are only two regular churches; one about the middle of Dunrossness, and the other in the parish of Sandwick. The distance between them is about six miles.

The bay of Levenwick, on the east side, is the only sheltered harbour on this extensive range of coast.

On the west side of Dunrossness there is an island, or rather a peninsula, connected to the main by a sandy beach, which is sometimes flown over by the water, called *St Ninian's Isle*, on which stood a church, the site of which can still be traced. It is said, that the captain of a Dutch vessel, being nearly lost in a storm at sea, vowed, that if he was preserved from the dangers that threatened him, he would build a church on the first land at which he should arrive. This island was the spot to which he first came, and here he built a church, which he consecrated to St Ninian. There are the remains of another church on a project-

ing headland called *Ireland-head*, not far from this.

This ministry contains about two thousand merks of rental land; is productive in corn; and exhibits a variety of interesting scenery.

II. *Ministry of Burra and Bressa.* This is a very disjointed ministry. The islands of Burra lie on the west, and Bressa and Noss on the east side of Mainland, having the isthmus of Quarf betwixt them. Quarf is bounded on the north by the parishes of Gulberwick and Tingwall; on the south by Coningsburgh; and on the east and west by the sea. Bressa is about six miles, and Burra one mile, from Quarf.

Bressa is about four miles and a half long, and about three broad. There are the remains of several chapels in it, as St Olla's, St Mary's, and St John's chapels; and the imperfect vestiges of several burgs and forts. There is at present a regular church in Bressa. This island forms the celebrated harbour of Bressa Sound; and it has a deep bay on its north-east side, called *Aith's-voe*.

Bressa contains about three hundred merks of rental land.

Noss lies on the east side of Bressa, from which it is separated by a narrow strait. It is a beautiful island, and there are in it, the ruins of an old chapel, supposed to have been built by shipwrecked people. But the great peculiarity about Noss is what has been known by the name of the *cradle*; and which was originally constructed to facilitate the catching of birds.

On the east side of Noss, is a verdant holm of considerable extent, about 200 feet high, the sides of which, although not altogether mural, are smooth and shelving, so that there appears to be no part of it on which the hands or feet of a man can rest. Great numbers of the black-backed gull nested there annually, unmolested by any intruder, until a daring climber gained its summit, and rendered their succeeding occupation of it both uncertain and precarious. The distance between the holm and the island is about ninety feet. The person who ascended the holm, drove in stakes of

wood near the edge of the side next to Noss, and similar stakes being fastened on the island, a rope was thrown round the stakes on both, and a machine of an oblong shape, resembling a table with its bottom turned up, slung upon this rope, in such a manner, as to admit of its being readily moved along it. By this machine, a single person passes readily backwards and forwards, between the holm and the island. The person who had achieved this feat, instead of availing himself of the aid of his discovery, attempted to return by the rocks, and he was dashed to pieces in his descent.

It is not known exactly, at what time this curious species of pensile bridge was first established. It existed, as it does at present, in the time of Brand, in 1700. The gulls still frequent the holm, though not in such numbers as before; but the cradle is not kept up solely on their account. The holm affords rich pasture for sheep, a dozen of which are annually fed on it. The cradle is slung generally towards the end of July, and the following is the mode of doing it. A man ties a stone to the bight of a small line, keeping the ends in

his hand, and he continues to throw the stone until the line gets beyond the stakes. He then fastens a thicker rope to one of the ends of it, and draws it also round the stakes. This operation he repeats, always adding a thicker rope, until the one on which the cradle is to sling be firmly fixed round the stakes. Notwithstanding the apparent danger connected with this proceeding, no fatal accidents have ever happened.

The islands of *Burra* are separated from Mainland by a long narrow channel, called *Cliff Sound*, in which there is excellent anchorage. These islands are separated from each other by a narrow stream, over which there is a kind of wooden bridge. The east island is called *House*, and the other *West Burra*. "Here is a church within a mile to the southmost end of the island, standing near to the Sound side of *Burra*, called *St Lawrence Church*, (built, as it is reported, by the midmost of the three *Norwegian* sisters, the eldest having built the church of *Tingwall*, and the youngest sister the church of *Ireland*), the steeple whereof will be five or six stories high; though a little

church, yet very fashionable, and its *sanctum sanctorum*. (or quire) yet remains."*

In 1652, a Dutch squadron was driven by a gale of wind on the west side of the islands of Burra. One ship was wrecked, another burnt, and the rest sailed up among the islands to the westward, and anchored in safety.

The islands of Burra are finely situated for fishing. The soil is rich, and the crops are in general good. They contain about two hundred and fifty-two merks of rental land. Besides these, there are two other small islands, Hevra and Papa, in the neighbourhood of the Burras, attached to this ministry.

III. *Ministry of Lerwick*. This ministry, strictly speaking, consists only of the parish of Gulberwick, of which Lerwick long formed a part; and both were formerly united to Tingwall. They were disjoined soon after 1700,

* Sir Robert Sibbald's Description of the Isles of Zetland, p. 26.

It was this beautiful edifice that was pulled down, to furnish stones to build the parish church with.

and, to aid in making up the stipend to the minister, king William granted five hundred merks out of the bishop's rents of Orkney.

This ministry, is bounded on the north and east by the sea, on the west by Tingwall, and on the south by Quarf and the sea. It extends about eight miles in length, and three in breadth, and contains only two hundred and fifty merks of arable land. There is a large Pictish castle, considerably entire, situated in a small island in a lake near to Lerwick; and there are the remains of several chapels at Gulberwick. Although there are several bays, yet Bressa Sound is the only safe harbour on the coast of this parish.

IV. *Ministry of Tingwall.* This ministry consists of the parishes of Tingwall, Whiteness, and Weesdale, the island of Trondra, and several small islands adjacent to the south-west coasts of Tingwall and Whiteness. It is bounded on the north by Nesting and Delting; on the west, by Delting, Sansting and the sea; on the south, by Quarf and the sea; and on the east, by the parish of Lerwick. It is about ten

miles long and eight miles broad, and contains upwards of fifteen hundred merks of rental land. This ministry formerly constituted an archdeaconry, and was afterwards divided between two ministers, Tingwall and Scallaway forming one charge, and Whiteness and Weesdale another.

There have been several fine churches in the ministry, as that of St Magnus in Tingwall, of St Olla in Whiteness, and our Lady's church in Weesdale. There are at present two regular churches in it, one at Tingwall, and another in Whiteness. The parishes of Tingwall and Whiteness possess an excellent soil, are in general well cultivated, and are capable of being much improved. Scallaway, Laxfirth, and Weesdale-voes, are the chief harbours in this ministry.

V. Ministry of Sansting and Aithsting. This ministry is composed of the united parishes of Aithsting, and Sansting, and the islands of Vementry, and Papa-Little. It is bounded on the north by a large arm of the sea, called *Swar-back's-min*; on the west, by Walls and the sea;

on the east, by the parish of Weesdale; and on the south, by the ocean. It is about nine or ten miles long, and six broad, and contains seven hundred and forty merks of rental land. There were formerly two regular churches in this ministry, one at Sand, and another at Aith. At present there is only one, situated about the middle of the parish of Sansting; but the people of Aithsting have voluntarily fitted up a church at their own expence, and the clergyman regularly officiates in it.

There are the remains of chapels, Pictish castles, and concentric circles of stones, in this ministry; and it abounds in excellent harbours. Gruttin-voe, between Sansting and Walls, is six miles deep, and one and a half broad, affording secure and safe anchorage. From Gruttin-voe smaller bays branch off. Sella-voe, on the south side of Sansting, is a sheltered haven; and Bixter-voe, common to it and Aithsting, is about seven miles long, and is sheltered from every wind.

VI. *Ministry of Walls.* This ministry is composed of the parishes of Walls, Sandness,

and Papa-Stour. Walls and Sandness are bounded on the north, west, and south, by the sea; and by Aithsting and Sansting, on the east. These parishes extend about nine miles in length, and six in breadth. They present few objects of antiquity, beyond the remains of some small Pictish castles, and almost obliterated chapels. The island of Papa-Stour is about two miles long; it is very fertile, and exhibits many interesting natural beauties, and is penetrated by several small bays, in which vessels anchor. The most frequented harbour in Walls, is Vaila Sound, which is safe and commodious, and finely interspersed with small islands. Walls and Sandness contain about six hundred and fifty merks, and Papa-Stour about two hundred and twenty merks of rental land.

VII. *Ministry of Delting.* This ministry consists of the parish of Delting, and the islands of Mukle-Roe, Little-Roe, Brother-Isle and Fisholm. Delting is bounded on the north by Yell Sound; on the west, by Sulem-voe and St Magnus bay; on the south, by the parishes of Sansting and Weesdale; and on the east, by

Nesting and Lunnasting. It is about ten miles long, and eight miles broad, and contains about eight hundred and sixty merks of rental land.

There were formerly several chapels in Delting, one in particular was dedicated to St Olla. There are still the remains of a few Pictish burghs in it, of the smallest class. This parish has been long remarked for its extensive hill pasture, and the many sheep which they supported; but the number has greatly declined since 1784. There are many extensive bays on the coast of this parish, the chief of which are Busta and Olnafirth-voes. There are two regular churches in Delting.

VIII. *Ministry of Northmaven.* This ministry consists of a single parish, and a small isle called Lamma, in Yell Sound. It is united to Delting by an isthmus called *Mavis-grind*, which is not more than seventy yards from the high water mark on each side; and so low and level, that with spring tides the sea nearly covers it. On every other side Northmaven is bounded by the sea. This parish is about sixteen miles long and eight broad, and contains

about eleven hundred and fifty merks of rental land. The parish of Northmaven has long been celebrated for the variety and magnificence of its rocky scenery, and the number and excellence of its fishing stations. There are few remains in it either of churches or chapels, but there are still some Pictish burgs. There has been but one regular church in the ministry since 1761.

IX. *Ministry of Nesting and Lunnasting.*

This ministry is composed of the parishes of Nesting, Lunnasting, and the island of Whalsey. Nesting and Lunnasting are bounded on the north by Yell Sound; on the west by Yell Sound, Delting and Tingwall; and on the south by the sea. Both Nesting and Lunnasting are amply provided with excellent harbours, and exhibit the remains of chapels and Pictish burgs. A considerable part of Lunnasting consists of a peninsula resembling Northmaven.

Whalsey is an island about three miles long, and two miles distant from Mainland. There is a church in Whalsey, one in Lunnasting, and another in Nesting. The ministry contains

about seven hundred and fifty merks of rental land.

X. *Ministry of South and Mid Yell.* The island of Yell is about twenty miles long, and six or seven broad. It is divided into three parishes, South, Mid, and North Yell. The two former, with the islands of Hascussay, Samfrey and Bigga, constitute a ministry. The island of Fetlar formed a part of this ministry before the Reformation. There is a church in each of these parishes, and not long ago there were in Yell, the remains of twenty chapels. There is still a small one to be seen in the island of Hascussay.

There are several excellent harbours on the south and east coast of Yell, the chief are Hamna, Mid-Yell and Basta-voes; and the ministry contains about a thousand and seventy merks of arable land.

Yell is separated from Mainland, by Yell Sound; the nearest point is about two miles across. This is a dangerous ferry, and in win-

ter it is frequently impassable for many days in succession.

XI. *Ministry of North Yell and Fetlar.* The north parish of Yell, and the island of Fetlar, were erected into a ministry in 1709. Fetlar is about four miles from North Yell. It is five miles long and four broad, and is extremely fertile. At a place called Snaburgh, on its west side, are the remains of a camp, or some species of fortification. I have already alluded to the probability of the opinion which considers this to have been a Roman camp.

Fetlar contains about eight hundred merks of rental land.

North Yell, the other parish of this ministry, is by far the most agreeable district in Yell, and abounds in picturesque scenery.

There is a church in North Yell and another in Fetlar. North Yell contains about six hundred and fifty merks of rental land.

XII. *Ministry of Unst.* The islands of Unst and Uyea constitute a ministry. Unst is about nine miles long and four broad, and is usually divided into three parishes. It is agreeably diversified by hills, valleys, and rocks, and, except Dunrossness, is the most verdant and best cultivated district in Zetland. It is a curious fact, that the north-east parts of Feroe, Iceland, and Zetland, are the most verdant and agreeable spots in these different countries. From Scaw, the most northerly point in Unst, it appears as if the eye could range to the very pole; and in a clear day, the expanse of sea presented to view, excites an idea of boundless immensity.

There are the remains in this island, of upwards of twenty chapels, several Pictish burghs, and other vestiges of antiquity, to most of which I have already alluded. Some of the chapels still retain the name of the saint to whom they had been dedicated, as St John, St Sineva, &c.

Unst contains about two thousand and fifty merks of rental land. Its best harbour is Balta

Sound, into which vessels can enter, and from which they can go out, with any wind.

Uyea is about two miles long and one broad. It contains about ninety merks of rental land, and forms the harbour of Uyea Sound, in which vessels frequently anchor.

XIII. *Ministry of the Isles of Foula, Fair-Isle and Skerries.* Much about the time when Fetlar and North Yell were united, the islands of Foula, Fair-Isle and Skerries, were erected into a separate ministry, and an itinerant clergyman appointed to it.

Foula lies about sixteen miles from Mainland, and about thirty from Fair-Isle, and the latter is about fifty miles from Skerries. The passage even from Mainland to each, is attended with danger, except in very fine weather. There is a small church in each of these islands. Foula contains about sixty merks of rental land; Fair-Isle one hundred; and Skerries between thirty and forty.

There is no harbour for vessels in Foula, but there is a small one in Fair-Isle, in which a French privateer took shelter in 1741. Skerries consist of three small islands, which, together, form a triangular shaped harbour. This is a principal fishing station in the summer time.

Soon after the appointment of a clergyman to this disjoined insular charge, a vacancy occurred, and the islands were attached to the ministries from which they had been separated, viz. Foula to Walls, Fair-Isle to Dunrossness, and Skerries to Nesting. The respective clergymen of these ministries, generally spend a week every summer in these islands, which is all the ecclesiastical intercourse which they have during the year. The inhabitants are sober and industrious.

In 1794, a clergyman was appointed by the presbytery of Zetland, to this disagreeable charge, but a situation more worthy of his superior abilities presenting itself, the former was soon resigned, and it has never been revived since.

The twelve clergymen of these ministries constitute a presbytery, which has synodical powers, and they hold their regular constitutional meetings at Lerwick. The living of none of them, is under £. 80, nor above £. 150.

SECTION II.

Of the Population of the Zetland Islands.

As agriculture was but little attended to in the early stages of society in Zetland, it is probable that the population of this country remained long in a low state. Depending on other countries for constant supplies of corn and grain, and prosecuting the fisheries but with a view to relieve a temporary necessity, the number of inhabitants would necessarily be small.

Some have conjectured, that the numerous chapels dispersed over the islands are indications of a great population having existed at some former period; but this is by no means a

satisfactory view of the subject. There is always a much greater number of places for religious worship in catholic, than in protestant countries, and Zetland, as well as all Great Britain, was long under the influence of papal dominion. There are at present in Rome three hundred and fifty churches, all of which are well attended, yet its population does not much exceed that of Edinburgh.

It is a favourite opinion among the people, that the number of inhabitants was greater in the time of their ancestors than at present, and that they were then more wealthy, and lived in greater abundance. But even this latter part of the observation can be understood to apply but to a comparatively late period, when, as the farms were much larger than they are now, it is probable that those who occupied them lived better than their successors. As the quantity of arable land, however, at that time, was much less than it is at present, and as the other sources of wealth were also less abundant and varied, the number of inhabitants must also have been less. Mr Smith particularly mentions the paucity of enclosures

in 1633,* and the capability of increasing the number.

Campbell, who took his information on this subject chiefly from Sir Robert Sibbald's manuscript account of the Zetland isles, in 1698, estimates the number of inhabitants to be about 20,000;† but from the loose manner in which he makes the statement, it appears that his information was by no means correct.

According to Dr Webster's account, the number of inhabitants amounted, in 1755, to 15,210. From several statements it appears, that the number of inhabitants was greater in 1733 than in 1755, and this reduction took place most probably in 1740. The amount of the population, according to Sir John Sinclair's statistical account, 1792 or 1793, was 20,186; and that by order of Government in 1800, was 22,379. The following table will shew the changes which have taken place between 1755, 1792 and 1802.

* Smith's *England's Improvement revived*, p. 256.

† Campbell's *Political Survey of Great Britain*, vol. i. p. 698.

Population of the Zetland islands, according to the Census of Dr Webster taken in 1755, the statements in the Statistical Accounts, transmitted about 1792 or 1793, and published by Sir John Sinclair, in 1798, and the statement of the population taken from the abstract of the answers and returns to the Population act (41 Geo. III. 1800. Part ii. Scotland, p. 536.) completed in 1802.

<i>Parishes.</i>	<i>Population.</i>		
	In 1755,	1792-3,	1802.
1. Dunrossness, including Sandwick, Coningsburgh, and Fair-Isle,	2295	3327	3361
2. Bressa and the Burras, including Quarf and the islands of Hevra and Papa, - - -	1098	1225	1330
3. Lerwick, - - -	1193	1259	1706
4. Tingwall and Whiteness, compre- hending Trondra and the islands on the coast, - - -	1412	1786	1863
5. Aithsting and Sansting, with the islands of Vementry and Papa- Little, - - -	911	1285	1493
Carry Forward,	6909	8882	9753

<i>Parishes.</i>	<i>Population.</i>		
	In 1755,	1792-3,	1802.
Brought Forward,	6909	8882	9753
6. Walls, including Sandness, Papa-Stour, and Foula, -	1450	1723	1967
7. Delting, including the islands of Mukle-Roe, Little-Roe, Brother-Isle, and Fisholm, -	1221	1504	1449
8. Northmaven, with the small island of Lamba, -	1009	1786	2045
9. Nesting and Lunnasting; including Whalsey and the Skerries,	1169	1535	1941
10. South and Mid-Yell, with the islands of Samphray, Bigga, and Hascussay, - -	986	1422	1576
11. North-Yell and Fetlar,	1098	1346	1389
12. Unst, including the island of Uyea, - -	1368	1988	2259
Total,	15,210	20,186	22,379

A census was taken in 1804, with a view to the division of some charity meal, when it was found that the population had received a considerable increase since 1802.

Previously to 1770, the population had been checked by the irresistible powers of disease

and scarcity. In the years 1700, 1720, and 1760, the small-pox alone carried off, at each time, about the fourth part of the inhabitants. Measles, hooping-cough, and the pestilential epidemics, had also a considerable share in the general mortality. In 1740 and 1766, great and general scarcity was experienced, and although few individuals died of absolute want, there can be little doubt that it laid the foundation of diseases from which the sufferers never recovered. Inoculation became general in 1770, and the small-pox has been comparatively harmless since that time. The principal increase in the number of inhabitants, between 1755 and 1792, took place between 1770 and 1792; for besides the less general mortality by disease, Great Britain was at peace during a considerable part of the time.

The causes which led chiefly to this increase in the population, were the encouragement given by the landholders to early marriages, peace, and the small-pox having been disarmed, by inoculation, of its mortality.

Between 1755 and 1792, almost all the landholders managed their estates themselves; all were merchants; all engaged in the ling fishery; and to increase the number of fishers was their great object. "The system now universally adopted, of parcelling out the lands into very small portions, that the lairds may have a greater number of fishermen, greatly contributes to early marriages; so that a bachelor is a very singular phenomenon in this country."* As the cultivation of new ground could not immediately supply provisions for the increased population which followed, the farms were split into smaller divisions to make up the deficiency. I have stated what has been generally the consequence of new enclosures; that instead of improving the quality, and adding to the fertility of the soil, so as to supply food for the increase in the number of inhabitants, a great proportion of the ground so enclosed was merely improved in pasture. Hence, when the season was unfavourable, and the crop poor, such a person and his family added greatly to the number of consumers, without having con-

* Statistical Account of South and Mid Yell, vol. ii. p. 574.

tributed, in an equal degree, to augment the stock of provisions for the whole.

This anxiety on the part of the landholders to prosecute the ling fishery, created a demand for labour; and their wish to encourage early marriages, gave a tendency to the population to increase considerably beyond the means of subsistence which the country could yield. In 1783 and 1784, particularly in the latter year, the crop failed entirely, and, so dreadfully severe was the weather, and so scanty the quantity of fodder, that two thirds of the whole sheep and cattle in the country died. The heritors supplied their tenants with immense quantities of provisions at a great expence; but the effects of famine were averted by the bounty of Government.

By the census taken in 1802 it appears, that there had been a considerable increase in the number of inhabitants, since 1792, and even between 1802 and 1804. This also was a period when the price of almost all the exports of the country was raised, and when both proprietors and tacksmen were anxious to increase the

number of fishers. This demand for labour continuing, even although the supply of provisions was precarious, enabled the population to advance, in spite of several severe checks ; such as the entering of a number of men annually for the navy, loss of lives by boats at the fishing, epidemical and contagious diseases, and the effect of scarcity. The crops failed almost entirely in 1802, 1803, and 1804. The grain and provisions imported in 1803 amounted to £. 30,000, and that of 1804 to £. 20,000.

Since 1804, the population certainly has not increased. Besides the men who have been impressed, or entered as volunteers into the navy in Zetland, many have been impressed annually, by ships of war intercepting the Greenland vessels on their return from the ice. A considerable number of boys, too, have entered for the navy, or left the country in the merchant service. Since the establishment of the straw manufactory, great numbers of girls have regularly gone to Edinburgh every year as servants ; and measles and the hooping cough have thinned the number of children.

These causes have tended to keep down the population ; but there are others beginning to operate, which will be still more effectual in their influence. The landholders now see that there are other and more beneficial modes of employment than the ling fishing, as it is at present conducted ; and that although a man be a tenant, yet if he go a voyage to Leith, or to Greenland, he may either repeat that at the commencement of the fishing season, or be impressed by the regulating officer. It is therefore not to the advantage of the landholders to encourage an increase of seamen. Even if the tenant should remain on the land, experience has unequivocally demonstrated, that the practice of supplying his wants at all times on credit, is in reality a losing concern ; and that the profits derived from the fishing are altogether inadequate to meet the frequent recurrence of scarcity. These considerations have diminished the ardour in the landholders for encouraging early marriages among their tenants, and have, in some instances, had the effect of inducing them to withdraw their accustomed patronage and support from them in times of need. The young men witness this change,

and observe the effects of it; and they become sensible, that the only means left, of diminishing their calamities, is to guard against engaging in that line which leads to them. They generally, therefore, leave the country, or if they remain in it, do not evince a disposition to marry, until they have previously obtained what they think will enable them to support a family.

Thus, it appears, that besides the natural tendency in the principle of population to increase beyond the means of subsistence, this tendency has been augmented in the Zetland islands, by an active desire on the part of the proprietors of land to encourage early marriages; and that the population has been checked by the combined operation of disease, emigration, famine, and moral restraint.

That the present population of Zetland, even in a state comparatively improved, is too great for the means of subsistence which the country can supply, will appear from a review of the facts connected with it. We have seen, that in the most favourable seasons, the crop alone could not subsist the inhabitants for more than

six months in the year; or, in other words, there is actually bread for only half of the present number of inhabitants. But by fishing during the winter and spring, a supply of provisions is procured throughout the year. As the crops however, have been found to fail, even more than once in every three years, it is probable that, on an average, it does not supply the inhabitants more than four months in each year.

The fishing, too, during winter, is by no means uniformly steady. The sillocks, the great support of the poor, have failed on some occasions, as much as the crop; so that, taking the average supply of the fish, as of the crop, it may be affirmed, that the sea does not afford food to the inhabitants for more than four months in twelve. There is, therefore, a deficiency of food for four months in every year, and this estimate comes near to the amount of provisions annually imported, which I have stated to be £. 11,000 on an average. The profits of the summer fishing, singly, can do little more than pay the rent of the land; the tiends, superiorities, and public burdens, must

be paid out of the produce of the farm. When the crop fails, the fodder to the cattle often fails also, and the tenant is thrown upon the mercy of the landholder, and must either starve, or be supplied on credit.

Nor can these evils be much diminished, far less averted, by the surplus produce of other branches of industry. In the country parishes of Zetland, during the winter time, there is no occupation whatever, but for a few branches of handicraft, which are soon exhausted. The case is the same in Lerwick, where the population is vastly too great for the means of employment and support. It is a curious fact in the history of so small a place, that a great proportion of the inhabitants, although apparently in good circumstances, have no certain, or visible means of subsistence, who rise in the morning without any idea how the day is to be spent. This was observed by the Rev. Mr Sands above twenty years ago, and the evil has been increasing ever since. In almost every season of scarcity, several of the smaller farmers, unable to maintain themselves in the country parishes, and being altogether

idle, sell what live stock is left, and remove to Lerwick. Their chief reliance for support is on fishing, and the employment derived from the accidental arrival of vessels in Bressa Sound. The certainty of being impressed on their return, has prevented many of them from going to Greenland, for several years past, and the want of the wages which they received when engaged in that voyage, has added much to their miseries.

Such is the state in which Zetland has been in for a long period, and to which it may perhaps be reduced the very next year. It appears that this country, in its present state, can barely furnish the means of subsistence to a population equal to two thirds of the actual amount. This fact has been unequivocally established, by the almost constant apprehension of scarcity, the want of employment, and the frequent large importations of grain and meal; which, although they may display the humanity of the landholders to the tenants, neither invalidate this statement, nor lessen the progressive nature of the evil.

Were the inhabitants of Zetland to be reduced by one third of their present number, the details of agriculture and of fishing would be as well performed as before; there would be enough in ordinary years, and, in favourable seasons, there would be a surplus of provisions to meet any accidental deficiencies. But although this fact be admitted, yet, as the landholders have themselves been chiefly instrumental in encouraging the system which led to the present superabundant population, it would be both cruel and unjust, to introduce any plan of management on the Zetland estates, which might lead to a compulsory removal of the tenants from their farms. The chief objects which they ought now to have in view, should be, to endeavour to remedy the existing inconveniences, and diminish as much as possible the chance of their future occurrence.

. That the fisheries may be so conducted as to yield, with less risk and expence to the individuals engaged in them, a large increase to the disposable wealth of the country, I have already endeavoured to shew; and I conceive that they are the chief and natural sources of wealth to

this country. But it ought to be first ascertained, that the fisheries not only can supply labour, readily, to those engaged in them, but that they are likely to continue to furnish with the means of easy subsistence, such additional number of individuals as may be disposed to enter on this branch of industry. A sudden demand for labour, in any particular department of industry, if accompanied with a prospect of it being productive, even although the means of subsistence are precarious in the acquisition, may give a tendency, as we have seen to be the case, to an increase in the population, which may be injurious to the adventure, and fatal to multitudes.

Good enclosures, larger farms, more efficient implements of agriculture, leases, attention to the cultivation of plants which yield winter fodder to cattle and sheep, regular cover for both in the winter time, and a judicious distribution of the ground into arable and pasture land, would be of incalculable benefit to Zetland; but it would be long, notwithstanding, before they could yield such a certain increase in the means of subsistence, as could warrant

an increase in the number of inhabitants. In reasoning on this subject, it must never be forgotten, that this country, in ordinary seasons, can supply the inhabitants with provisions for eight months in the year only; and, therefore, not until it has been experimentally found to be capable of furnishing provisions to a population equal to one third above its present amount, would it be prudent to augment the number. It is not so much a question, whether it would yield the means of subsistence to twenty-three thousand inhabitants, but whether it could furnish the means of support to thirty thousand.

The observation of Mr Malthus applies strictly to the state of Zetland. "It is not mere population that is wanted, but a population that can obtain the produce of other countries, while it is gradually improving its own; otherwise it would be immediately reduced, in proportion to the limited produce of this small and barren territory; and the melioration of the land might perhaps never take place, or, if it did, it would take place more slowly indeed, and the population would always be exactly

measured by this tardy rate, and could not possibly increase beyond it.”*

Although Zetland be capable of considerable agricultural improvements, yet it is doubtful whether it be susceptible of being improved to the extent that has been supposed. There are certain large tracts of ground in this country, which appear to be almost beyond the reach of improvement; or at least, there is no individual who could afford to be at the expence, to bring them into a state of cultivation, nor could the probable returns from them defray the bare expence of dressing, necessary to keep them in a tolerably productive state. “We should not therefore be too ready to make inferences against the internal economy of a country, from the appearance of uncultivated heaths, without other evidence.” Were every acre in the Zetland islands converted into arable land, the country would be uninhabitable from

* An Essay on the Principle of Population, by T. R. Malthus, vol. ii. p. 295. The history of the changes to which the population in the Zetland islands has been subjected, furnish a satisfactory illustration of the opinions of this ingenious philosopher.

the want of fuel ; for the whole extra produce would do little more than supply coals.

But while we suggest plans for meliorating the comforts of the present inhabitants, we should guard against any future increase in the population, which may be prejudicial to the happiness of the whole. This appears to consist chiefly, in the practice of that principle of moral restraint, which prescribes to a man the propriety of not engaging in marriage, until he has previously provided the means of supporting the family which may be the consequence of it. Experience had already demonstrated the necessity of a prospective view to the consequences of the married state, as appears by the following ancient and salutary municipal regulation. "That none be allowed to marry who has not forty pounds Scots of free gear to set up house upon, or some lawful trade whereby to subsist ; nor such as cannot read, and is someway capable to demean himself as a Christian master of a family."* The encou-

* Country Acts. Appendix to Gifford's Historical Description of Zetland.

agement, however, given to early marriages, and the demand for labour which the keen and general prosecution of the ling fishery created, soon after the landholders took it under their own management, overcame the restraints which necessity had enjoined, and produced the evil, which it is now so difficult to remove.

It is painful even to think of repressing a feeling so interesting to the mind, and from prudential motives to check the best impulses of nature. "But the earlier years of life would not be spent without love, though without the full gratification of it. The passion instead of being extinguished, as it now too frequently is by early sensuality, would only be repressed for a time, that it might afterwards burn with a brighter, purer and steadier flame; and the happiness of the married state, instead of an opportunity of immediate indulgence, would be looked forward to as the prize of industry and virtue, and the reward of a genuine and constant attachment."*

* Essay on Population, vol. ii. p. 324,325.

CHAPTER XIII.

OF WHALES AND WRECKS.

I HAVE stated in the general history, that when the earl of Morton obtained his irredeemable grant to the crown rights over Orkney and Zetland, he received at the same time a donation from his sovereign, of the droits of admiralty. These were understood to be, a right to all wrecks driven on the coast, and to a certain size of whales, whether killed by the fishermen, or accidentally run on shore. It appears that the earl of Morton transferred these rights to sir Laurence Dundas, along with his other claims, although he had no right to do so by his charter; wherein the rights of admiralty are expressly reserved to the crown. The quantity and value of the wrecks vary very much, but a considerable number of whales have been forced on shore in

some of the bays annually, for several years past, and the division of them has been an incessant source of dispute and litigation, between the admiral, the landholders and the tenants. It may be worth while to inquire into the merits of the claims of each. It is generally in situations where power can be successfully exerted in opposition to the dictates of equity, that we discover the radical defects of any system of general policy, however apparently good, and develop the prevalence of selfish or benevolent affections in the mind.

SECTION I.

Of the Division of Whales.

IN establishing prohibitory penalties against the occupancy of things, whether animate or inanimate, which have remained in their original state, and which are supposed never to have had an owner, the framers of our laws have been aware of the difficulties they had to encounter, in repressing the industry, and in

abridging the natural rights of man. It is therefore received as a principle in law, that all animals, while they retain their natural liberty, cannot be said to belong to any one, and necessarily become the property of him who first seizes them. The restrictions on this privilege are comparatively few, and the circumstances under which they operate are explicitly stated in books of law. By the laws of Scotland, as well as of other countries, there is a certain size of whales which belong to the king, and which are therefore called royal fish. Such whales appear to be of the largest dimensions, for it is stated, that "all great whales belong to the king, and also such smaller whales, as may not be drawn from the water to the nearest part of the land on a wain with six oxen."* It appears to be a legitimate deduction from this principle, that in every instance where a whale is claimed by the admiral in behalf of the king, it is indispensably necessary that the former, to establish the validity of his claim, demonstrate by the test enjoined by law, that the whale really is of the class known by the

* Erskine's Institutes, sect. x. p. 166.

appellation of a *royal fish*; and if the admiral refuse to have recourse to this test, and forcibly carry off the whale, he is guilty of an act of oppression to an individual, and of a breach of the law of the country.

From what I have observed, respecting the size of the skeleton; and from what I have learned from others, concerning the bulk and weight of the blubber and muscle, I am disposed to think, that any whale not exceeding thirty, or thirty-five feet in length, may be drawn by a wain and six oxen at high water; the distance prescribed is very short, and the power is great.

Frequent disputes appear to have taken place with respect to the division of whales in Zetland, between the admiral, the landholders, and the tenants; and to put the matter finally to rest, as he thought, the earl of Morton, in 1739, entered into an agreement with about twenty of the heritors of Zetland, with a view of fixing and appreciating the shares of the different claimants to whales and wrecks. This contract is dated the 9th day of July 1739, and

was made in the presence and with the approbation of the stewart-depute for the time, and recorded in the stewart court books of Zetland.

After stating that the agreement shall remain in force during the continuance of his lordship's rights of admiralty of the islands of Zetland, it assumes his right to "all whales and pellocks, as well great as small, of whatever kind or denomination," and determines that the division of them shall be made in the following manner.

"*Primo.* Of all whales or pellocks, not under one, nor exceeding four fathoms in length, driven on shore and secured within the islands of Zetland, the persons actually employed in saving and securing them, are immediately to have one third part delivered over to them, without any diminution whatsoever, at the sight of the baillie of the bounds where they are driven on shore. And the proprietor or proprietors of the ground where such whales are driven or run on shore, to share the other two third parts, delivered to them upon giving

receipt and obligation to the baillie to be accountable to the earl, or his order, for one of the said two third parts, at the rate of ten shillings Sterling for each pelloch.

“*Secundo.* Of any whale fish exceeding four fathoms long, the heritor or heritors of the ground where the same is driven or run on shore, shall have the sole management or disposal of having the same made in oyle, upon giving proper security to the baillie to account to the same and the earl, or his order, upon oath, by equal divisions, for two thirds of the oyle, and paying them, respectively, fifteen shillings Sterling for each barrel thereof—the heritors having all the charge upon the subject.”

This agreement was made in direct violation of the law which I have quoted, and the tenants, who were the individuals chiefly concerned, were not parties to it. The pellocks (porpoises) are sometimes shot with a fowling piece, and a single person can lift them into a boat. As well might his lordship have claimed a share of every fish from which a drop of oil

could have been extracted. A more unjust and oppressive coalition could scarcely have been formed.

Although it be conceded, that the earl of Morton, as donee of the royalties of Zetland, had no power to enter into any such contract with the heritors, yet as "heritable steward, justiciary, and sheriff," he had a right to institute such changes, and establish such regulations for the internal management of the islands, as he thought proper. But this power, even if it was so extensive in its nature as the words imply, was cancelled a few years after. In 1747, the heritable jurisdictions were abolished, and earl Morton received seven thousand two hundred pounds Sterling, as an indemnification for the loss which he was supposed to have sustained by that bill. The earl, therefore, could no longer demand that which the law had declared not to be exigible, and for the abstraction of which he had received a valuable consideration. His lordship sold, in 1766, all his legal rights in that country to sir Laurence Dundas. The claim to a share of the small whales, even if it had been originally valid, on

the principle stated, it is evident he could not sell, for it had been bought up by Government from himself; nor has it ever been understood, that either sir Laurence Dundas or his son, at any time, renewed with the successors of those heritors who signed the original compact, any similar agreement. Yet, notwithstanding all this, the third part of many hundred whales of the size already mentioned, has been claimed and taken in name of lord Dundas, as admiral, since 1766; and not more than two years ago, in a process carried on before the court of admiralty at Lerwick, by several landholders against some tenants, for a share of certain small whales which the latter had killed in the sea, the contract between their ancestors and the earl of Morton formed a chief ground of their claim.

The tenants have never silently submitted to this alleged right, but have resisted it, though ineffectually, by every means in their power. In August or September 1784, several fishermen belonging to the parish of Sansting fell in with a great number of whales at sea, and with great labour and difficulty drove them into Sella-voe, where with guns, spits and scythes, they killed

and brought on shore twenty-three of them. The largest one was scarcely twenty-three feet long, and the smallest only six. One whale being severely wounded in the throat by a gunshot, run on shore; but all the rest were either killed by the people, in three or four fathoms water, or they were so much exhausted by fatigue and wounds, that the people were able to fasten ropes to them, and bring them on shore. The greatest part of the whales were landed on a beach belonging to the glebe, and the others on a beach belonging to the estate of sir John Mitchell of Westshore, at that time set in tack. The fishermen underwent great fatigue, and ran the risk of their lives, in endeavouring to kill and capture the whales. One boat was completely destroyed, and others much damaged. The day after the whales had been killed, the late Walter Scott, Esq. appeared on the ground, and claimed the whole in name of the admiral. He employed the people to flench the whales, and transport the blubber to a neighbouring booth at Sand, for which he paid them. The blubber was hastily sold by auction. Mr Ross of Sound, I believe, was the purchaser, but there was an

extraordinary article in the sale, "that none of the men who had assisted in killing the whales, should be permitted to bid for them." The fishermen petitioned lord Dundas to restore them their share, and I understand his lordship sent peremptory orders to refund the tenants every farthing claimed in his name; but it is a certain fact, that they have never received any part of it to this day.

His lordship's conduct, on this occasion, shews, at least, a disinclination to demand a share of all whales, if it does not also imply a doubt in the validity of the claim itself. His ample fortune does not require that he should

——— wring

From the hard hands of peasants their vile trash,
By any indirection.

The precedent, however, had but a limited operation, for the claim was renewed, and a share demanded in name of the admiral in many succeeding instances. But as far as I have been able to learn, the test enjoined by law has never been employed, and the claim has been enforced, upon a belief in the vali-

dition of the agreement between the earl of Morton and the heritors.

It appears, however, to be deducible from these observations, that lord Dundas, as donee of the royalties over Zetland, has an unquestionable right to all whales which may not be drawn by a wain and six oxen; but that the claim to all lesser whales, is not only contrary to law, but has been formally resigned by the person who originally assumed it, and any future attempts to revive it must be deemed highly illegal.

The heritors claim a share of these small whales, on the following grounds: 1st, Upon the agreement already alluded to, between them and the earl of Morton; 2dly, As proprietors of the shores upon which the whales are driven and killed; 3dly, In conformity to the "*use and wont*" of the country; and, 4thly, In consequence of a bargain to that effect, on letting the tenants a twelvemonth's lease of their land.

I have already examined the merits of the agreement between the earl of Morton and the heritors, as far as concerns the admiral. As it was made contrary to law, as the tenants were not parties, nor ever gave their consent to it, I apprehend the claims of the heritors, founded on that agreement, to be equally unsubstantial as that of his lordship.

The second ground on which they found their claim to a share, although more plausible, is not more solid than the first. It has been the practice since the introduction of feus, to consider every thing classed under the head *respublicæ*, as *inter regalia* or the property of the crown. Among others of a similar kind, are highways, rivers, ports, and the sea and shores, as far at least as the high water mark. Let us suppose that a whale has been forced on shore by boats, even with flood-tide. It is obvious from the size of the animal, that he must take the ground a considerable distance from the edge of the shore, and this is observed to be uniformly the case. The whale then comes on the property of the crown, or of the public; if he be a royal fish, he falls by law to

the king, but if he be under the size denominated royal, he then becomes naturally the property of the catcher. But, besides, by the practice of the country a considerable portion of the beach above the high water mark, is also reckoned public or royal, and on this is founded the privilege of drying and curing of fish in Zetland. This is analogous to what occurs in the salmon fishery, where the banks of the river are acknowledged to be the property of another, yet a royal right to the fishing of salmon in any river, confers on the grantee the right "to draw his nets on the banks of the adjacent grounds, *without the proprietor's consent*, as a pertinent of the fishing."* It would be singular, indeed, if the fertile banks of a river in the south of Scotland can be traversed with impunity, while the sterile shores of Zetland shall be deemed hallowed ground.

But it is urged by the heritor, that he has a claim to a share, as an indemnification for the injury which his kelp shores and land sustain

by the killing of the whales and the subsequent boiling of the oil. The tenant, however, or the killer of the whale, most commonly occupies the farm on the shores adjacent to which the whale has been forced ; and if any injury be sustained by the land, he is the immediate sufferer. If he be disposed to put up with the loss, the anxiety of the heritor on that score is altogether misplaced. The blubber is generally removed from the whale at the water side, and the skeleton is afterwards drifted off by the wind and tide.

The end of summer and autumn are the seasons when the whales come into the bays, and from the state in which the crop then is, this is the period when, by the tumultuous assemblage of people, their capture is most likely to be attended with injury to the ground. Yet beyond a fair indemnification for the damage done to the fields, or to the tang growing on the shores, nothing more can be legally demanded. If a person were to destroy the growth of turnips in his neighbour's garden, by covering the beds of it with guineas, that circumstance would not surely entitle him to a

share of these guineas; but he would certainly be liable for the damage incurred by their presence. To maintain that the ground is deteriorated by the putrefaction of a whale, is to demonstrate an unacquaintance with the nature of manure derived from the decomposition of animal matter.

The claim of the heritor, therefore, to an actual share of the whales, either on the principle that they have been killed through the medium of their property, or that the ground has been injured by their presence, appears to be founded in mistake, and to be unsupported by reason.

It is more difficult to appreciate the influence of custom or the use and wont of a country, in establishing a legal precedent for any particular line of conduct; but it is surely necessary, in maintaining its operation, to shew, that the custom in question has been uniform in its practice, for a series of years at least equal to the period of ordinary prescription, and that it was acted upon, either before the formation of a law to the contrary, or that the individuals

were ignorant of the existence of the introduction of a law that had an opposite tendency.

That it has been the practice of the killers of whales in Zetland, quietly to concede a determinate share of them to the proprietors of the ground adjacent to the shores on which they were driven, is what I believe cannot be proved. During the long period between the year 1468, when Zetland became annexed to the crown of Scotland, and 1742, when the royal rights over it were sold to the earls of Morton, there was a continual change of masters. The people were incessantly petitioning the Government to support them against the oppression of their intermediate rulers; and it generally interposed in their behalf. The superintendence of the islands was alternately sold and redeemed, and seldom did any system of policy endure for more than a few years. The very agreement between the earl of Morton and the heritors of Zetland, alludes to the frequency of previous disputes, and it endeavours to reduce to order what had before been involved in confusion and controversy. It was at one time the use and wont of the country, to give

the minister the teind of the whole, and to yield up a share to the baillie for his trouble in superintending the division of the whales. The Rev. Mr Anderson of Mid-Yell was, I believe, the last clergyman who resigned his share, and the heritors thus became themselves instrumental in destroying the very precedent which they now produce as a ground of their claims. This plea has also been effectually resisted in several instances, one of which I shall mention. In the year 1803, Mr Robert Ross of Sound, together with between seventy and eighty men, drove on shore forty whales, on the shores of the ground belonging to Mr Scott of Scallaway, but which were at that time occupied by a tenant, who holds a ninety-nine years lease from Mr Scott, and who was one of the men concerned in the capture of the whales. Mr Ross was appointed agent and manager in the business. The first thing he did was, to appoint two people well acquainted with the making of kelp, to ascertain what injury the tang had sustained by the presence of the whales, and to give the possessor of them a fair indemnification for the damage which they had suffered. Then having deducted the ex-

pence attending the boiling of the oil, and casks, he divided the remainder equally among the men engaged in driving the whales on shore.

In this instance, which is still recent, the plea of custom, which has been usually urged, in behalf both of heritors and admiral, was successfully resisted, and the captors remained in quiet possession of what they had obtained at the hazard of their lives. Had the cause been defensible upon principles of intrinsic equity, it is scarcely to be supposed that it would have been abandoned without a contest, if it had been only to prevent the establishment of a precedent, which must have been unfavourable to the future resumption of the claim.

But we shall suppose, for argument's sake, that it had been the practice of some tenants for several years to give to the proprietors of their farms, uninterruptedly, a third part of all whales which they caught, it does not follow, necessarily, that their successors are bound by an implied agreement, to adopt a similar

line of conduct. A precedent derived from the voluntary action of an individual, is not, I presume, like that established by the division of lands, and the acquisition of property, which are every where recognized, and which, although operating with uniformity, require the sanction of forty years practice to give them the currency of law. The sons of any of these tenants might say to the heritors, " True; our fathers were accustomed to give you the third part of all the whales which they killed, or drove on shore; but they have left behind them no written document to that effect, which we consider as binding on us to follow their example. If they, through ignorance, or good nature, chose to share with you the fruits of their industry, we think proper to keep them to ourselves. What we promise to do we will endeavour to perform; but we will never make the errors of our ancestors the rule of our conduct." Assuredly, at no time has this practice ever received the uniform sanction even of five years in succession.

The plea, that there is a contract between the heritor and the tenant, and that the for-

mer, on letting him the annual lease, expressly stipulates that he shall receive a determinate share of whatever whales the tenant may be instrumental in killing or driving on shore, during the time he occupies his farm, is a claim consistent with law; and wherever it can be shewn to exist, must be respected. All agreements imply consent in the parties making them, and are therefore supposed to be entered into for mutual advantage. So convinced are the heritors that this is the only true right that they can with propriety urge, in support of their claim to a share of the whales, that several of them, and the tacksmen of some large estates, suddenly, in 1807, summoned every tenant without exception to remove, for the express purpose of making this item about the whales a constituent article in the terms of lease. This act, while it deprived the tenants of a beneficial contingency that would have resulted to them from a long lease, proved, at the same time, the inaccuracy of the statement, that the verbal agreement to occupy a farm for one year, is recognized by the heritor as binding on him for two more.

No person can question the right of a proprietor of land, to lay any restrictions consistent with equity, on the terms on which alone he is disposed to let it; and he who occupies a farm with a knowledge of these restrictions, naturally becomes bound to fulfil them. But while some may be considered fair and liberal, others may appear harsh and oppressive; and although a man may, from necessity, be brought to comply, his acquiescence can by no means establish the general justice of the proceeding. As in the case of the ling and other fisheries, let each receive a share proportioned to the risk he runs, and the means he employs. The appearance of whales on the coast, is an advantageous contingency, by which both heritors and tenants may be benefited, and the former have been in the custom of considering it as a pertinent of their estates. The latter, however, are the efficient party; they hazard the destruction of their boats, and endanger their lives in the pursuit, for not one man in five hundred of them can swim, and they have therefore an obvious right to a large share of the produce of the enterprise. It is not saving and securing that which might otherwise have

been taken away, but it is a bold and an independent exertion on the deep, voluntarily entered on, and resolutely carried through.

As it appears, that the claim of the admiral to a share of these small whales is an illegal assumption, and as the captors are the individuals from whom this share has been hitherto withheld, let it be restored to the lawful owners; let the heritors receive one part, and the captors two parts; and this is surely as ample a proportion to the former, as either justice or liberality countenance.

SECTION II.

Of Wrecks.

THE admiral, as donee of the crown, has a right to all wrecks when the real owner cannot be discovered. *Quod nullius est, fit domini regis.* It has happened repeatedly, that vessels have been wrecked upon the coast of Zetland, and considerable quantities of valuable goods be-

come the property of the admiral, from the impossibility of discovering the owners; but, as in the case of the whales, difficulties have often attended the acquisition of it. The tenants, however, have never pretended to any regular share of wrecks; they have contented themselves with what they could conveniently carry off and conceal, and their allowance for salvage, which latter not being always duly paid to them, has occasioned the practice of theft. The heritors, on the contrary, have claimed a share of the wrecks, as a pertinent of their grounds, and have on some occasions received it, but the admiral set aside the custom, when it interfered with his interest.

“ The proprietor of the ground where the wreck falls, always claims a share of the wreck, pleading the old country pactice, which was, that all wrecks were divided into three shares, one thereof to the proprietor of the ground, one to the salver, and the other to the proprietor, if any appeared, which failing, to the king, with the best anchor and cable to the admiral. But the admiral court, for several years past, has not followed that practice, being thought exorbi-

tant, and only allows the heritor any damage his ground may sustain, and some allowance for the use of it; which is thought by many a great hardship upon the heritors, and a cutting them out of their ancient privilege.”*

This shews, however, that the use and wont of the country, in matters of this kind, were seldom much respected, and without regard to uniformity of practice, each individual availed himself of a former precedent, as suited his convenience or his interest.

In the same agreement between the earl of Morton and the heritors, respecting the division of whales, are certain articles respecting the mode of management to be observed in the case of wrecks. After providing for the security of the property, his lordship prohibits all intrusions on the part either of the heritors or of the tenants, and bestows on each a suitable indemnification for their loss or trouble. To ensure a faithful discharge of the duties of humanity on the part of the tenants, the earl in-

* Gifford's Description of Zetland.

roduced the following liberal article into the agreement.

“ 5th. In order to encourage the common people and inhabitants of this country to faithfulness and diligence in assisting ships and men in distress, and in recovering and saving of wrecked goods, the earl promises and engages, during the continuance of his lordship’s right of admiralty, and his being satisfied of the inhabitants being faithful and diligent as above, that when any shipwrecks happen, and much goods are saved, that may yield his lordship twenty pounds Sterling within one year, he shall yearly appropriate that sum, or any lesser sum that may fall yearly to his lordship, as vice-admiral, to the public service of the country ; to be applied by the heritors at any head court or public meeting, in presence of the steward-depute for the time, to such public use and service within the country, as to them shall seem most necessary.”

It appears however, that this latter part of the contract had never been regularly implemented. Several valuable wrecks happened be-

tween 1739 and 1766, when the earl of Morton transferred his claims to the droits of admiralty, and much larger sums than twenty pounds fell to the share of his lordship; but neither that nor any "lesser sums" have been "yearly appropriated to the public service of the country." His lordship's successors have not been more observant of this part of the contract than himself; for although they have received a share of the whales, they have never complimented the country with the donation. Such an annual sum, left occasionally to accumulate, and judiciously laid out, might have been of great use to the country, and have constituted the foundation of a public fund.

Whatever disputes may have arisen about the division of unclaimed wrecks, the survivors have always been treated with the greatest kindness and humanity. To the truth of this observation, the individuals themselves have on many occasions borne ample testimony. Captain Preston was shipwrecked on the coast of Zetland, and, speaking of the inhabitants, he says, that they are "much given to hospitality, civil and liberal in their entertainment, and exceed-

ingly kind to strangers, which I may say indeed from experience; for I never met with more civility in any part of the world." "In the year 1780, a Russian frigate was wrecked on the island of Whalsey. Mr Bruce Stewart, the proprietor of that island, ordered immediately his tenants to fit out proper boats to save what lives could be saved. Unfortunately, all their exertions, which were made at the risk of their own lives, could save only five of the Russian sailors. These five men were entertained by Mr Bruce at his hospitable mansion for several months, and sent home to their native country. From the report of these five men, the empress of Russia gave orders to her ambassador at the court of London, to write, in her name, a letter of thanks to Mr Bruce of Symbister; which letter I have seen."* I do not mention these circumstances as displaying any thing peculiar in the character of the people, but because some have entertained a contrary opinion.

The want of light-houses is certainly a chief cause of many of the wrecks which occur on

* Statistical Account of Nesting, vol. xvii. p. 501.

the coast of Zetland. This country is surrounded by rocks on the east side, which lie a considerable distance from the land, and in a dark night or hazy weather, a vessel gets embayed among them, before the crew are aware of their contiguity. A light-house on Noss-head, and another on Fair-Isle, or Sumburgh-head, would be of essential use to vessels approaching Zetland from the southward; for if they do not make the land before dark, they are under the necessity of lying to for the night, and in the event of an unfavourable change of wind taking place, necessarily lose their passage.

CHAPTER XIV.

**OF THE OBJECTS OF NATURAL HISTORY IN THE
ZETLAND ISLANDS.**

A DETAILED account of the objects of natural history which the Zetland islands present, would furnish, of itself, materials for a volume. In a geological point of view, this country is peculiarly interesting; and many hundred undescribed marine insects are every day to be seen on its shores. In the other departments of natural history, it exhibits less either of novelty or variety; and in the sketch of it, therefore, which I propose to give, I shall confine my observations chiefly, to such points as appear to be less generally known, and leave to some future votary of the science, the task of minute relation.

SECTION I.

Of Atmospherical Phenomena.

IN the first chapter of this work, I have stated several of the peculiarities of the climate of Zetland; and to the observations respecting its temperature and weather, then offered, I must now refer. I mentioned, that electrical phenomena had been less frequent for several years than formerly. The heaviest thunder storms generally occurred in the month of August, but seldom in the preceding months of summer; and often not again throughout the year, except in the winter months of December, January, and February. Indeed, if there be a time when thunder may be expected to occur in the Zetland islands, more than at another, it is during these latter months, when westerly wind and rain succeed, rapidly, to northerly and easterly winds with snow, as takes place in case of a thaw. Yet seldom, even then, more than two peals occur at a time. Occasional flashes of lightning, unac-

accompanied by thunder, occur frequently in the winter months during frost, when the air is clear and transparent.

Parhelions, or mock suns, used also to be of more frequent occurrence formerly than of late. I remember once to have seen two at the same time. They did not appear to be very distant from each other, and remained visible for several hours. One of them very much resembled the real sun, both in shape and splendour.

A singular appearance of black dust in the atmosphere was observed in Zetland in October 1755, and the circumstance of it being recorded was in consequence of a letter from sir John Pringle to sir Andrew Mitchell of West-shore, requesting to be informed, whether he had observed any unusual appearances in Zetland, about the time of the earthquake at Lisbon, in 1775. The following is an extract of sir Andrew's letter to sir John Pringle on the subject.

“ In compliance with your desire, I made particular inquiry, whether at or about the time

the earthquake happened at Lisbon, November 1. 1755, any uncommon phenomena were observed to appear in the islands of Orkney or Zetland, as such had happened about that time in other parts of Scotland. From Orkney, I was informed that nothing particular had happened, only, that about the time mentioned, the tides were observed to be much higher than ordinary. I received from Zetland a letter, May 28th 1756, from Mr William Brown, master of the grammar-school at Scalloway in that country, a sensible and observing man ; wherein he writes verbatim as follows : “ Blessed be God, notwithstanding the great devastations that have been made in other parts of the world by earthquakes, we have been entirely free from any disaster of that nature : nor has any thing extraordinary happened in this country, since you left it, only on Monday, October 20th last, between the hours of three and four in the afternoon, the sky being very hazy as it uses to be before a storm of thunder and lightning, there fell a black dust over all the country, though in greater quantities in some places than in others. It was very much like lamp black, but smelled strongly of sulphur. People in the

fields had their faces, heads, and linen blackened by it. It was followed by rain. Some people assign the cause of it to some extraordinary eruption of Hecla. But I shall trouble you no more about it, as some of your friends have written to you of it some time ago."

" In June 1756, I returned to Zetland; and, upon further inquiry, found what Mr Brown had written me was attested by Mr Mitchell, parson of the parish of Tingwall, and by several gentlemen of credit and reputation, who had seen and observed the same phenomenon in different parts of the country at the time above mentioned."

" Mr Brown having omitted to mention how the wind did blow at the time the black dust was observed, I made particular inquiry about that circumstance, and found it was from the S. W. which does not seem to favour the opinion, that the dust proceeded from an eruption of mount Hecla, which lies about N. W. from Zetland, unless it may be supposed that a north wind happening just before, had carried this dust to the southward, and the south west

wind immediately following, had brought it back to the northward. But, in this case, would not this black dust have been observed in Zetland at its first travelling to the southward? Upon inquiry I did not hear it was.”*

Sir Andrew says, that although he made inquiries to ascertain the fact, it did not appear that the people in Orkney were aware of any similar appearance at the time. But Dr Barry positively asserts, that such an occurrence took place, and that the black dust received in Orkney the appellation of *black snow*. He ascribes it to an eruption from Hecla, which he says took place at that time.† It is obvious that this phenomenon could not have been connected with the earthquake at Lisbon, which, besides the circumstance of it not being attended with any volcanic eruption, happened about eleven days after the dust had been deposited in Zetland.

A great deal of rain falls annually in Zetland, but except from its effects, no idea can be form-

* Annual Register for 1758, p. 349.

† Barry's History of Orkney.

ed of the absolute quantity, as no accurate journals of the weather have ever been kept daily for any considerable length of time.

SECTION II.

Botanical Observations.

THE objects of botanical research are neither numerous nor diversified. Among the mosses, there occur a few rather novel species of cryptogamia, and I have seen what I took to be, one or two species of indigenous grasses growing along the sea-side.

There is a considerable number of fuci growing on the shores of Zetland; but I question much, whether, even in this department, there be much novelty. I understand that Orkney has been explored lately, by a competent judge, who found scarcely a single undescribed species. Zetland has certainly never been examined with an equal degree of attention; and while Orkney is composed chiefly of sandstone,

Zetland exhibits shores of a different exposure, and rocks of a different structure. Analogy therefore leads us to infer, that if there are not new species, there may be varieties.

Almost all the plants which are to be met with in Zetland have been described in the Flora Scotica of Lightfoot, the Flora Britannica of Smith, and in Dr Barry's account of the plants of Orkney. Professor Jameson did not fall in with a single unknown plant during his stay in Zetland; and, although Mr Neill has made a considerable addition to the number of plants in Dr Barry's list, he has not added one to the number of hitherto undescribed species. He found a few plants, *scilla verna*, *jasion montana*, and *dianthus deltoides* in Zetland, which he did not meet with in Orkney.* I have no doubt, however, that a skilful and industrious botanist would discover several new species of plants in Zetland.

* A Tour through Orkney and Zetland, p. 193.

SECTION III.

Geological Observations.

ZETLAND presents many interesting objects of contemplation to the geologist. In most places, the primitive and secondary formations of rocks can be distinctly traced, and they every where furnish satisfactory illustrations of the Neptunian system. The volcanic appearances are extremely few, and they are purely adventitious.

The hills run either in ridges, or appear conical and detached. There are several of the conically shaped hills which are very extensive, and of considerable height. The most perfect specimens of this shape, occur in the island of Bressa, and in the parishes of Tingwall and Sansting. The other hills are generally round-backed; but except in the island of Unst, and the parish of Northmaven, there are few hills of the rugged and abrupt kind.

Sumburgh-head, which is the most southern point of Mainland, is composed of indurated sandstone. It is a bold high rock, and may be seen at a considerable distance off. A similar kind of stony material appears to form the coast along the whole east side of the peninsula of Dunrossness, as far up as Sandwick. The sandstone is incumbent on rocks of gneis, and micaceous shistus, and in the latter the slatey structure is very apparent. The island of Mousa, which lies opposite to the north-east bay of Sandwick, is composed, according to Professor Jameson, of sandstone and sandstone flag, with several strata of limestone. This latter, he observes, runs in the sandstone from east to west. In some parts large masses of the sandstone have been separated and torn up by the force of the sea, from the beds in which they had long remained, and been removed to a considerable distance.*

The cliffs of Coningsburgh, which extend north from Sandwick, and stretch a consider-

* Outline of the Mineralogy of the Zetland Islands,—*Mineralogy of the Scottish Isles*, vol. ii. In this work, there is the first, and best view of the mineralogy of Zetland.

able way to the westward, are composed chiefly of micaceous shistus, and other primitive rocks. There is a large bed of limestone at Coningsburgh; and this is the chief, among the few districts in the country, where considerable quantities of lime are made annually as an article of sale.

The coast along the shore to Quarf is composed chiefly of sandstone, and the precipitous hills which bound the valley of Quarf, of micaceous shistus. The coast towards Lerwick is formed chiefly of sandstone and breccia; and near to Quarf, there is a projecting headland, called the Ness of Brinnaster, in which there are several natural caves.

The rocks in the neighbourhood of Lerwick are composed of sandstone and breccia; and the islands of Bressa and Noss are formed of similar materials. Noss is separated but a few hundred yards from Bressa, and a rapid current runs through the strait which divides them.

The east coast, towards Whalsey, exhibits similar appearances, masses of sandstone, and

sandstone flag, laying over micaceous shistus. Near Catfrith in Nesting, are extensive strata of limestone, and near Neep, in the same parish, there is a small island, which, from the rocky and tortuous strait which separates it from the main, appears evidently to have been forcibly disjoined from it. In this neighbourhood may be seen enormous masses of rock, which the sea has displaced from their former beds, and laid upon the dry land. Several of the hills in Nesting and Lunnasting, are composed of micaceous shistus, and gneis. The island of Whalsey, according to Professor Jameson, is composed chiefly of mica slate, and granite.

The island of Yell is composed principally of micaceous shistus and granite. The island of Hascussay is also formed of similar materials.

Fetlar is composed, for the most part, of mica slate, serpentine, and gneis; it exhibits other interesting fossils, as quartz, rock crystal, asbestos, and amianthus. The serpentine however, forms the most considerable rocks, and, besides the common micaceous shistus which composes

the lower strata in some parts, there appears to be a somewhat new and curious species of this rock. "The serpentine having formed a considerable extent of cliffs, disappears, when a curious species of micaceous shistus presents itself, composed of rounded masses of quartz, of considerable size, connected by means of mica, thus forming a rock not unlike breccia. This rock, however, is only to be considered as a species of micaceous shistus, where the quartz masses are of a greater size than usual. This curious rock forms a considerable extent of cliffs; but at Strandiburgh, a micaceous shistus, which seems passing to ardesia, takes its place. This micaceous shistus also forms a considerable extent of coast, which is low, presenting a most splendid appearance when the sun shines, his rays being reflected from the micaceous rock, as from immense mirrors."*

The soil of Fetlar is light, thin, and of a brownish colour.

* Mineralogy of the Scottish Isles, vol. ii. p. 214, 215.

The island of Unst, which is about three miles from Fetlar, presents a similar appearance, and its mineral productions are also much the same. The hills on the north side of Balta Sound, are of a conical shape, rugged at the top, and composed chiefly of serpentine, which, by exposure to the air, has a brown dusky appearance. In the island of Balta, the serpentine predominates, chiefly of a dark green colour, and the shores of the bay of Balta Sound are covered with irregular pieces of the same material. The serpentine is in some places traversed by small veins of Labrador hornblende, of a fine dark green colour, and foliated fracture, which at first sight appears as if it were crystallized. Besides this beautiful fossil, there occurs among the serpentine, a species of talc and actynolite.

The rocks at the northern extremity of Unst are composed chiefly of gneis and mica slate, but chiefly the latter, in several parts of which there are interspersed large and beautiful garnets. In Herman-ness, which is a lofty projecting piece of land, the rocks consist of gneis and mica slate. Here there are several

subterranean caverns of great extent, into which the sea flows, but which are of such difficult, and even dangerous access, that it is not once in six months that it is safe to venture into them in a boat. It is in these more inaccessible resorts, where the large seals bring forth their young, on a beach at the innermost part of the caves.

Considerable masses of sandstone occur on the south side of Unst.

The north and west side of Yell abound in the natural beauties of stupendous and rugged rocks, and arched caverns, where gneis, mica slate, and granite, are formed into a variety of figures.

Rona's-Hill, on the north-west part of the parish of Northmaven, is an immense mountain of granite, and the great rocks on the west side of that peninsula, are composed chiefly of the same fossil. I have already described the caverns formed by the sea, near the Villens of Ure. In this neighbourhood, in 1784, a stone, computed to be twenty tons

weight, was lifted from its bed, and removed a considerable distance nearer the land. This stone is of a cubical shape.

About one hundred and fifty feet from the high precipitous ridge on the west side of Northmaven, stands a lofty rock or holm, the sides of which are perfectly mural. It is called *Maiden-Skerrie*, and is here, as to relative situation, what the holm of Noss is on the east side of the country. No human being has ever set foot on its surface, and the black backed gulls maintain it in exclusive and unmolested possession.

The Isle of Stennis, which is but a short distance from the extreme point of this peninsula, in a westerly direction, is composed chiefly of the dark red sandstone. On the west side of the island may be seen whole beds rent, loosened, and ready to be finally separated. Blocks of stone of great size have been elevated at least seventy feet, and then projected to a considerable distance on the green part of the island, the verdure of which will soon be obliterated. This operation goes on every winter.

The rocks farther east on the same coast, about Hillswick, are composed of serpentine and mica slate; and the external surface of the ground indicates the presence of serpentine, by exhibiting a thin soil of a brownish colour, as in Unst and Fetlar. On the east side of Stennis is a lofty rock called Dor-holm, perforated by a magnificent arch, about one hundred and fifty feet high, and five or six hundred feet wide at the bottom. Nearer to Hillswick, is a stupendous rock called the Drongs, cleft in three different places, nearly to the bottom, of unequal height, and with a considerable space between each perpendicular mass. When seen obscurely through a fog, it conveys the idea of a vast ship under sail. It is truly a grand and picturesque object.

The whole west coast of Northmaven to Mavis-grind, presents a similar structure in the rocks, and exhibits a variety of natural beauties. At Mavis-grind can be traced the gradual progress of the sea, in its efforts to force a passage between the west and east sides of Mainland. On the west side of the peninsula is a small bason, with a rocky island in the

middle of it. A narrow and winding passage, with precipitous rocks on each side, opens a communication between this little haven and the Atlantic ocean.

The islands of Mukle-Roe, Papa-Little, and Vementry, which form a considerable range of coast on the west side of the country, are composed chiefly of red granite, gneis, mica slate, and porphyry. They exhibit, like the rest of this coast, the astonishing effects of the sea, and present to view many interesting appearances, produced by the disjoined and independent nature of the rocks.

At Sandness, opposite to Papa-Stour, occur sandstone and limestone, and a considerable proportion of mica slate. The rocks along the coast of Walls, are equally wild and bold, and are composed of mica slate and granite.

The island of Papa-Stour lies opposite to Sandness, about a mile and a half distant. A rapid tide runs between it and Mainland, interrupting any intercourse between them in the winter time, for weeks in succession. " At

House-voe, in Papa, which is the landing-place in coming from Mainland, sandstone, sandstone flag, and breccia, form one side of the voe, which is low, and not rugged. In going round the island towards the next harbour, called Olis-voe, the sandstone disappears, when a fossil, nearly similar to wacken,* presents itself, forming cliffs of considerable height, without any marks of stratification; and it continues, with little interruption, all around the island, until it meets with the sandstone on the opposite side. From this it appears, that these two genera of rocks form the greater part of the island." Besides these fossils, there occur in Papa, veins of greenstone, basalt, and of steatite, in which latter are engrafted small masses of chalcedony and jasper. There are several caves in Papa-Stour, into which boats can proceed several hundred feet.

I have already described the general appearance of Foula. Professor Jameson gives the

* Mineralogy of the Scottish Isles, vol. ii. It would appear that this rock is the same with that which Professor Jameson calls clay-stone, in his general work on Mineralogy.

following account of its rocky structure. "The east side, which is much lower than the west, is composed of granite, micaceous shistus, and quartz. The micaceous shistus covers the granite, but in some places the sea has washed it away, and left the granite exposed, which is of a red colour, and is frequently traversed with considerable veins of quartz. The micaceous shistus also contains nests of green actynolite, and garnets are often dispersed through it. The south, west, and north sides of the island are composed of sandstone and sandstone flag, of the same species with that we have observed in the other parts of Shetland."*

The rocks on the coast of Sansting are rugged and precipitous, and are composed chiefly of granite, gneis, and mica slate, occasionally interspersed with limestone. There is a small island at the mouth of Sella-voe, composed principally of limestone. Beds of primitive limestone stretch along the voe of Weesdale for several miles, and through the whole valley of Tingwall. From Scallaway, "quite through

* Mineralogy of the Scottish Isles, vol. ii.

the valley of Tingwall, the general rock is limestone, in which are no vestiges of any marine production, and which, from its vicinity on each side of the valley to mica slate rocks, I suppose is *primary*.*

West from Scallaway occur rocks of mica slate, and in some places small masses of red granite may be seen in some of the islands on the coast of Whiteness. The rocks along the west coast of Quarf and Dunrossness to Fitfulhead, consist chiefly of mica slate. This latter is the boundary of Zetland on the south-west side, and it is a stupendous precipice.

It had long been conjectured, that there were different species of ores in Zetland, from the metallic appearances on some bogs, the number of chalybeate and other springs which exist in the country, and from the circumstance of some specimens of ore having been essayed and found to be productive in metal. About twenty years ago a miner accidentally

* Mineralogical Observations on the Shetland Islands, by Dr Traill, in Mr Neill's Tour.

arriving in Zetland, examined the appearances at Sandlodge in the parish of Sandwick, and at Quendal in the parish of Dunrossness. Little, however, was done by this person. Several years after, the Anglesey Mining Company sent over some persons to examine these ores, and, if rich in metal, to work them. These people carried off several casks of the ore, which were chiefly copper, but they never seriously engaged in working any of the mines.

From that time until 1808, different English companies entered deeply into the speculation. Shafts were sunk to a considerable depth, a steam-engine was erected, and several cargoes of ore were sent off. The ore exported, sold for about £. 2000, which having been sunk, together with £. 8800, the scheme was abandoned about a twelvemonth ago. What quantities of ore were obtained were found on trial to be rich; but the veins were small and soon exhausted. It appeared to be the general opinion, however, that this adventure failed as much from unacquaintance with the subject in those engaged in it, as from the alleged scantiness of ore.

Considerable quantities of bog-iron ore occur in different places, especially in the island of Fetlar and in the parishes of Sandwick and Dunrossness. Rather promising appearances of an iron ore, called iron-glance, occur at Fitful-head. Coal has never yet been discovered, although, from the nature of the rocks so generally prevalent, its existence may be inferred. To explore minutely the various minerals with which this country abounds, and to develop its geologic structure, must be the work of years, and the result of patient and laborious investigation.

From this sketch, there appears to be examples in Zetland of three of the Wernerian formations of rocks only; the *primitive*, *secondary*, and *altracial*. The primitive, although not confined to it, are most abundantly diffused over the west side of the country, where

——— Ocean, groaning from his lowest bed,
Heaves his tempestuous billows to the sky.

During a continued gale of wind from the south and south-west, the agitation of the sea is tremendously grand; and its roar among

the rocky caverns can be distinctly heard at a great distance after the storm has subsided. The rocks on this side of the country exhibit a rugged and unequal appearance, and although a lifetime is too short to perceive any decided changes on their magnitude or position, their appearance impresses the mind with an idea of perpetual decay. Foula appears to be an exception to the general rule. The highest cliffs of this island are composed of sandstone, while the lower and eastern part is formed of granite and mica slate. The whole exhibits the appearance of an immense block, separated by some convulsion from an adjoining continent.

Along the eastern coast, where the water has a more interrupted, and consequently less powerful operation, occur the sandstone, and rocks of secondary formation; but on the north side, where the stormy sea exerts its full influence, precipices of granite and gneis oppose a barrier to its incursions.

SECTION IV.

Zoological Observations.

As the living objects which Zetland presents are comparatively few in the number of genera, I shall arrange them rather according to the known habits of the individuals, than in conformity with the arbitrary classification of naturalists. In the division which comprehends the *quadrupeds*, I shall include those only which exist on, and derive their food from the dry land. The *birds* will be divided into resident land and water birds; migratory land and water birds; and accidental birds. Under the head *amphibia*, I shall describe the seal and otter; and the whale, although classed among the mammalia, I shall place at the head of the *fishes*. The *insects* naturally close the list of animated beings.

Quadrupeds.

THE quadrupeds are few in number, and of the kinds most generally known. The follow-

ing are all that Zetland affords; the horse, ox, sheep, hog, dog, cat, rat, mouse, rabbit, and ferret.

EQUUS CABALLUS (*Lin. syst.*) Horse.—The native Zetland horse is very small, seldom exceeding ten hands high, but well proportioned, strong, and capable of enduring great degrees of fatigue. The best kind of ponies, as they are called, are to be met with in the island of Fetlar. The description given long ago, by Buchanan, of the Orkney horses, applies to those at present in Zetland. “Sunt eis equulei, specie quidem contemptibiles, sed ad omnes usus, supra quam credi potest, strenui.”* They run wild in the hills until they are three years old, when they are caught for the purpose of carrying loads. They are seldom or never taken into a stable, even during the worst weather in winter; and when they fail in obtaining food on the hills, they feed on the drift-ware that is left along the seashore. When the snow remains long on the

* *Rerum Scot. Hist.* vol. i. p. 45.

ground, they approach the houses, and appear to supplicate assistance, having as it were ascertained, that support is nowhere else to be found. Some few more venturous individuals break into the yards during the night time, and destroy the corn.

Although never regularly broken in, they soon become docile and tractable, and exhibit proofs of great sagacity. They seem to recollect a road over which they have passed only once, with astonishing accuracy. I recollect performing a journey on horseback, in the summer of 1808, along with two other gentlemen. The distance we had to ride was five miles; and the course lay over a range of mossy hills, in which there was not the vestige of a foot-print. A guide attended, to point out to us the best parts of the road; and we were obliged to make many circuitous turnings, to avoid the more wet and boggy parts of the hills. We accomplished the journey tolerably well; but we had scarcely proceeded half a mile on our return, when we missed the guide, and found ourselves enveloped in a very thick fog. I proposed that we should wait until the fog

cleared up; but one of the gentlemen thought that it would be better to proceed, and give the horses leave to choose whatever road they thought proper. This last proposal was agreed to, and they brought us back in a shorter time than we had taken to go. The circuits they made on some occasions were so great, that we were often led to believe that they were wandering in the same uncertainty with ourselves; but our doubts were removed, by finding, that after a considerable time they brought us to a spot, which we recollected had in the former part of the day interrupted our progress, and in which we could distinctly trace the marks of their feet then first made in the moss. As we approached the end of our journey the fog cleared up; and when within a mile and a half of the termination of it, the horses, finding themselves altogether unrestrained, made a considerable deviation from the track prescribed by the guide, and conducted us by a much drier and more equal road than that which we had passed over on the former part of the day.

I was much struck and gratified at this display of memory and sagacity. In the devious

tracks of the hills they appeared to be guided either by the scent, or the perception of the traces of their own former footsteps, although in the more heathy parts of the road I thought that to be almost impracticable. When they came, however, on ground with which they had been previously familiar, they preferred the track which experience had shewn to be the best.

The native ponie is in general very healthy and long-lived. I have seen one forty years old, hale and strong. Scarcely any attention is paid to the breed. They all run indiscriminately together, and, as the largest are generally sold, those of the most puny stature are reserved for stallions. In the island of Unst, indeed, some attempts have been made to improve the breed of this useful animal, by crossing it with horses from Norway. The race obtained from the descendants of this stock, are larger and stronger than the native horse, and nearly as hardy.

Bos TAURUS, (*Lin. syst.*) Ox.—The ox, like the horse, is of a small size. This depends no

doubt, in part, on the nature of the breed, but something also may be ascribed to the want of a sufficient quantity of nutritious food in his youth. The calves are fed scantily with milk when very young, and when but a few months old they must shift for themselves. In bad seasons, especially when there is much frost and snow on the ground, their situation is truly distressing, as the quantity of general fodder is very trifling.

The ox is docile, hardy, and capable of performing great labour. The cow is small, and, except in the middle of summer, very lean, but yields a considerable quantity of milk.

OVIS ARIES, (*Lin. syst.*) Sheep.—The sheep is very small compared with those of the southern parts of Scotland and England, the carcass not weighing on an average more than thirty pounds. They have short tails and small horns, and the ears stand erect. They are of different colours; as white, grey, black, speckled, and of a dusky brown called *moorit*. The grey is the most prevailing colour. The quality of the wool varies very much, even on the same animal; the thighs

and rump yielding the coarsest, and the neck and breast the finest wool. The sheep yearn in the months of April and May, and generally drop one lamb each. It is by no means unusual for a ewe to drop two lambs, and some have had three; but this latter is rather an uncommon occurrence.

The sheep in Zetland all run wild in the hills. The different owners know those which belong to them by a mark on the ear, and the people can discriminate slight differences of this kind with wonderful ease and accuracy, even at a great distance off. In summer, they are generally driven into a small circular enclosure called a *crue*, for the purpose of taking off the wool. The native sheep are seldom shorn, but about the middle of May, when the fleece begins to loosen spontaneously, it is pulled off with the hand. This operation is called *rooing* the sheep. They are left very bare after it; but the people say, that the wool on the animal continues much finer when removed in this manner, than by the shears. Except for the purpose of rooing, weaning, and

marking them, on all other occasions the sheep are caught by dogs trained for the purpose. It is surprising with what accuracy they single out a sheep from among a flock; and in a short time the individuals who are not the objects of pursuit, appear to be sensible of the election in their favour, and become comparatively tranquil, while the other is hunted down.

The sheep are never taken under cover in the winter time, nor, in case of snow, is there any food provided for them. On this latter account they suffer greatly, having little else to feed upon, for weeks in succession, but the sea-weed growing on the shores, or what has been drifted on the beach by the surf. It is curious to observe with what precision they leave the hills and betake themselves to the sea-side at the moment the tide of ebb commences. This I can state to be an absolute fact, although I am utterly unable to explain by what process of sensation, recollection, or instinct it is effected. From remaining quiet on the hills, and endeavouring to browse on their summits, a whole herd is seen suddenly to

rush towards the sea-shore, and, on observing the state of the tide, it is found that the water has just begun to recede.

On the coming on of a storm of snow they retire to the more sheltered places, which are generally in the neighbourhood of the sea. There they are frequently snowed over, and by the subsequent melting and falling down of the snow, they are sometimes thrown over the rocks into the sea. On such occasions they frequently assemble in considerable numbers on the side of a hill, and place themselves in such a manner as that their heads all incline towards the centre. By this management their breath keeps them warm, and, by dissolving a part of the icy covering, forms a kind of vault above their heads. In this situation they have been known to remain for many days, during which they appear to maintain life, by eating the wool from off each others backs.

From this mode of managing them, it is not surprizing, that the sheep are affected with various diseases; yet the most severe and fatal

distempers have been imported into the country within a period of forty years.

Blindness first made its appearance in Zetland in 1770, and it was traced to communication with a ram from Montrose, which laboured under this disease at the time he was brought to the country. This affection consists in the formation of a film over the whole anterior part of the cornea, which produces complete blindness. When the attack is not very violent it wears off in about a fortnight, and it is observed to disappear more readily, when the animal is left to run at large than when taken into a house; but if not protected they suffer greatly by falling into mossy pits, and over rocks, and from the attacks of birds of prey.

Mr Stevenson, the Rev. Mr Singers, and Mr Hog,* have each assigned causes for this affection, which, as applied to the production

* A Treatise on the diseases of sheep, drawn up from original communications presented to the Highland Society of Scotland. By Andrew Duncan, Jun. M. D. *Transactions of the Highland Society*, vol. iii.

of blindness in Zetland, appear to me to be unsatisfactory.

Mr Stevenson ascribes it to the reflection of heat and light, in very sunny and dry weather, as it is observed, he says, to be more frequent when the hills become scorched, and on hard rocky soils, than on dark coloured hills covered with heather. The parish of Delting, into which the disease was first introduced, consists almost entirely of dark coloured mossy hills; and this topographical fact, coupled with the general observations on the climate of Zetland, tend to shew, that the exciting causes mentioned by Mr Stevenson never operated where the disease raged with its greatest malignity.

The Rev. Mr Singers conceives that this affection may be produced sometimes by the pollen of flowers, irritating the eyes of the sheep when blown in considerable quantity. In the hilly pasture of Zetland there is not the appearance of a flower in the course of many miles; and the few which do yield pollen, occur in the enclosures from which the sheep are carefully excluded during the summer.

Mr Hog ascribes blindness to continued fatigue and exertion, and illustrates his opinion by the examples of this affection occurring in a severe degree, in sheep that have been driven from a long distance to market. In the Zetland islands, sheep are never driven more than five or six miles at a time, and that only with a view to assembling them in the crue, for the purposes already mentioned. They are driven in the gentlest manner on such occasions, and not a single instance of blindness has ever been known to ensue from this treatment.

That these different exciting causes, when applied in sufficient force, may produce inflammation of the eyes, I have little doubt; but they are purely local and adventitious, and can never have any influence beyond the scene of their action. In the Zetland islands they are not known to operate, and yet a general disease exists, which exhibits, in its commencement and progress, a train of symptoms similar to that which characterizes the affection which is ascribed to their presence.

These considerations lead me to conclude, that the belief in Zetland, that blindness was originally imported into the country, and is at present propagated by contagion, is strictly correct. This opinion derives strength from different circumstances. The period of the first appearance of the disease, is fresh within the memory of many, and the fact is related by persons of unquestionable veracity and accuracy of observation; and it has been found to spread itself from the place where it first occurred, as from a centre. There are several parts of Zetland into which it has never yet found admission, although separated from those in which it rages, by a narrow ferry only. This fact supports the idea of a contagious principle. Were it, in general, the offspring of external causes, occasional instances would certainly be produced, although neither so frequent nor so numerous as in situations where their presence is more uniform.

From a general view of the ordinary progress of blindness in sheep, as mentioned by different writers on the subject, I am disposed

to believe, that the pathology of the different affections is not always well understood. In some cases there is genuine ophthalmia, where the inflammation extends from the conjunctiva all over the lucid cornea. This is among the worst species of it, and requires the most energetic treatment. But in those instances where "a blue slough covers the whole of the eye, without any admixture of red vessels," I am inclined to believe that inflammation has never existed. It is not a general quality in inflammation of the eye, which has proceeded the length of forming preternatural membranes, to subside spontaneously in so short a time as a fortnight, nor to be more readily removed when exposed to light and air, than when secluded from their influence. In some of those lighter attacks, where a blue film appears to cover the cornea, I presume that the appearance is occasioned by the distension of the cornea, from an increase in the quantity of the aqueous humour. This will produce as perfect opacity as a membrane, and it exhibits an appearance of a film over the eye. I have explained how this takes place in the human species, in dogs, and in

horses,* and analogy leads me to think, that it is also a frequent cause of temporary blindness among sheep.

The *Scab* was first introduced into the parish of Dunrossness, about twenty-three years ago, by two lambs sent from Scotland as a present to a gentleman, with a view of improving the breed of sheep in Zetland. The circumstances which favoured the propagation of the disease over the country, are curious and authentic. While the two infected lambs remained in a shed, the gentleman proposed sending a sheep of the Zetland breed to a friend in Lerwick. One was accordingly taken from the hill, bound, and ready to be put into a boat, when unfavourable weather coming on, the passage was delayed for several days. In the mean time, the native sheep was put into the same place with the foreign lambs, and communicated with them. When the weather became favourable for the departure of the boat, the sheep intended to have been sent by it was

* Treatise on the Varieties and Consequences of Ophthalmia.

found to have suffered so much by confinement, that it was not thought sufficiently good, and was returned to the hill, and another taken in its stead. Soon after this, the scab, the presence of which had never been suspected, broke out on the two lambs. They were immediately killed, but the reprieved sheep had already imparted the fatal present to a whole flock; and this disgusting disease has been extending its ravages ever since.

The destructive effects of this disease have been very obvious. Many individuals who had four or five hundred sheep a few years ago, have not now more than half a dozen; and the malignity of the affection is no doubt heightened by the want of proper remedies for its removal, and the careless management of the individuals affected by it. As the whole sheep of the country run wild among the hills, one animal may affect multitudes, and the disease once induced, is heightened by exposure to cold, damp, and scarcity of food.

For the benefit of those who may not have an opportunity of consulting the original, I

extract the following external remedy, which has been recommended for its cure.

“Mercury, however, is by far the most effectual remedy, although attended with some danger.—The following is Sir Joseph Banks’s method of applying it.

Take of quicksilver one pound;

Venice turpentine, half a pound;

Oil of turpentine, half a pint *English*;

Hog’s-lard, four pounds;—

Rub the quicksilver and Venice turpentine together in a mortar, until the globules of mercury disappear, then add the oil of turpentine and hog’s-lard, and mix for an ointment.”

“Apply the medicine, if possible, in dry weather, in the following manner. Begin at the head of the sheep, and proceeding from between the ears along the back to the end of the tail. The wool is to be divided in a furrow, till the skin can be touched, and as the furrow is made, the finger, slightly dipped in the ointment, is to be drawn along the bottom of it, where it will leave a blue stain on the skin and adjoining wool. From

this furrow, similar ones must be drawn down the shoulders and thighs to the legs, as far as they are woolly; and if the animal is much infected, two or more should be drawn on each side, between the fore and hind legs. Immediately after the application, the sheep are turned out among the rest of the flock, without fear of infecting it, or of sustaining injury themselves. The blotches dry up, and the sheep are sound in a few days. Instead of the above, the common mercurial ointment of the shops may be used, and some shepherds rub the part affected only, others the naked parts of the thigh and leg, and others apply it by tying a worsted cord, well soaked with it, around the neck.*

Vinster sickness. Gastritis, or inflammation of the stomach or bowels, is a frequent affection among the sheep in Zetland. From the black appearance which the mortified part exhibits, it is conceived to be produced by the rupture of a blood-vessel.

* Transactions of the Highland Society, vol. iii. p. 426, 427.

Water sickness, or general dropsy, also frequently takes place among sheep. It occurs under the different forms of *anasarca*, or water between the cellular substance and flesh, and *ascitis*, or water in the abdomen. This last species takes place most commonly in wet rainy autumns, continues during the whole winter, and sometimes carries off whole flocks. Tapping has been tried but never with success.

The *Sturdy*, or dropsy in the brain, is a very common and fatal disease. The operation of trepanning the skull, and extracting the water-bag which lies upon the brain, has been repeatedly and successfully performed since 1778, by individuals who never either saw or heard of a treatise on the diseases of sheep. A similar operation has also been successfully performed on the cow.

The *Shell sickness* has been improperly confounded with dropsy. It consists in a thickening and concreting of the omentum and larger intestines into small white lumps resembling shells, from which it receives its name. It is common to sheep that feed on wet mossy pas-

tures. They get lean, are disinclined to move much about, and the belly feels unequally hard. The people drive them to the sea-side, and force them to eat sea-weed, and drink salt water, as the only cure.

The *Mua sickness*, or rot, is also one of the diseases with which the Zetland sheep are affected. The insects which infest the liver in this complaint, are often three quarters of an inch in diameter, and flap vigorously on a table when removed from their nidus. Cold, continued wet on the ground, and a scanty supply of nourishing food, are among its chief causes.

PORCUS SCROPHA, (*Lin. syst.*) Hog.—Swine are very numerous in Zetland. They are of a small size, and of a dusky brown colour. The nose is broad and very cartilaginous, and the ears are long and erect. Their bodies are covered with a profusion of long thick bristles, which give them a singular appearance: when fed for some time on board of ship, on wholesome vegetable aliment, they become less bristly, and the flesh is very delicate. As they are

the only species of animal food, which the poorer classes of people can afford to bring up for their own consumption; they exist in great numbers, and root up and destroy the ground. In the sandy soil of Dunrossness they do incalculable mischief. In some parts of the country, the people introduce an iron ring into the snout, which prevents them from rooting.

The hair on their backs is so long, that ropes are made of it for different purposes. Dr Barry observes, that in Orkney the people use these ropes for letting down climbers among the rocks. They are very strong and elastic.

CANIS FAMILIARIS, (*Lin. syst.*). Dog.—The dog is of the shepherd dog kind. Dogs are very abundant in the Zetland islands. They are extremely versatile, and when well trained, can either catch sheep, or water with the gun. They are sagacious, watchful, and affectionate, and are seldom restrained in their personal liberty by the dread of hydrophobia. Sonnini remarks, that neither in Egypt, where dogs are treated with the greatest harshness, nor in the hottest zone of Africa or America, is canine

madness known.* This observation contradicts the fallacious opinion, which supposes it to be a disease either of hot climates or seasons.

The remaining quadrupeds are universally known, and present nothing peculiar.

Birds.

Although there are no birds peculiar to Zetland, nor any in it, which have not been anatomically described in systems of ornithology, yet the frequency and ease of observing their habits and modes of life, which this country presents, have enabled me to acquire certain facts respecting the economy of some of them, which are not generally known. As this is an interesting branch of natural history, I shall detail minutely those circumstances illustrative of it, which have fallen under my observation.

In describing the peculiarities of the birds, I shall follow the arrangement already proposed.

* Voyage en Egypte, tom. i.

Resident Land Birds.

FALCO ALBICILLA, (*Lin. syst.*) *Erne**, White-tailed Eagle.—This is the only species of eagle in Zetland. They have their nests in the high precipices of Unst, Northmaven, Foula, and a few other places; and if unmolested, regularly return to the same spot every successive year. Notwithstanding the great difficulty and danger of getting near the seat of this monarch of the air, the adventurous climbers frequently assail his habitation, and carry off the young. Having covered his head and face with straw to protect them from injury, the climber chooses an opportunity, when the eagle is expected to be from the nest, and at the hazard of his life endeavours to gain the spot. If the young be asleep when he arrives, the conquest is easily effected, but if awake and nearly fledged, a severe struggle ensues. A climber in the island of Unst, some years ago, when engaged in an expedition of this kind, surprised

* The names in Italics are those by which the birds are most generally known in Zetland.

one of the old eagles asleep on the nest. Although the shelf of the rock on which the nest lay, was barely sufficient to rest upon, he boldly threw himself on the bird, and, after a desperate conflict, strangled it.

This eagle feeds on young lambs, of which he annually carries off a considerable number, sick sheep, carrion, and fish. Fish, I believe, is his general food, and he boldly attacks the largest kinds if they happen to come to the surface. Several desperate combats have been witnessed between this bird and the halibut. The former strikes his claws into the fish with all his force, determined not to forego his hold, and although but rarely, is sometimes drowned in the attempt to carry off his prize. When he has overcome the halibut, he raises one of his wings, which serves as a sail, and if favoured by the wind, in that attitude drifts towards the land. The moment he touches the shore, he begins to eat out and disengage his claws; but if discovered before this can be effected, he falls an easy prey to the first assailant. I knew a gentleman, who, having

seen an eagle entangled in this manner, attacked and killed him on his arrival on shore.

The cry of the erne somewhat resembles that of a young dog, but is very acute, and heard at a great distance. The poultry are aware of him when a long way off, and by an irresistible instinct separate and conceal themselves wherever they can find a hiding hole. I have observed this to be the case even among young chickens, which were no longer under the care or guidance of their mother, and who saw him then perhaps for the first time.

FALCO PALUMBARIUS, (*Lin. syst.*) Gos-hawk.—This bird is met with in Fair-Isle, Fitful-head, Foula, and Unst. He forms his nest in the most inaccessible parts of the rocks. He is very destructive to all species of poultry, and is so strong as to be able to carry off a pigeon in his claws. It is with the upper part of the wing that he strikes his prey, and he has been seen to separate the head of the large stock duck from the body by a single stroke.

FALCO NISUS, (*Lin. syst.*) The Sparrowhawk, is more numerous than the former. He is a very bold bird, and pursues starlings and other small birds, down chimnies, and in at windows, and he is sometimes taken himself on these occasions.

FALCO ÆSALON, (*Lin. syst.*) The Merlin, is also common in Zetland, and, like the former, builds its nest in the rocks.

STRIX BUBO, (*Lin. syst.*) *Catyogle*, Great horned Owl.—This bird long inhabited the island of Unst, and constructed its nest on the tops of rocky hills, but is now very scarce. I have repeatedly seen five or six of them together in day light; they feed chiefly on rabbits, of which there are great numbers in Balta, and some other islands in the neighbourhood of Unst.

CORVUS CORAX, (*Lin. syst.*) *Corby*, Raven, Great Corbie Crow.—This bird breeds in Zetland in considerable numbers, and is even more select than the eagle in the choice of the situation, the nest being placed in the most inacces-

sible parts of the rocks. The female seldom lays above three eggs. In discovering objects of prey, the raven displays great sagacity. When the sheep or young lambs are weakly or affected with sickness, the ravens hover round and watch them for several days, and avail themselves of every opportunity that occurs, to attack and pick out their eyes. This they seem to do as the most effectual mode of disabling the animal, either from making any effectual resistance, or from flying to places of shelter.

In the detection of carrion, their scent is certainly very acute, and many think that they smell gun-powder, and by that knowledge evade the fowler. This, however, appears to be a mistake. Gun-powder, before it has been fired, emits no odour, and when the raven is alarmed he preserves as respectable a distance from the fowler before, as after the discharge of the piece. Indeed, on some occasions, when any bird has been shot, both ravens and crows fly around the sportsman, as if desirous to know what had taken place, and are frequently shot while engaged in such examinations. The shyness of this bird appears to depend on the

belief of danger, as associated with the cautious walk and offensive attitude of the fowler.

Although possessed of great strength, especially in the bill, the raven is rather a cowardly bird. He attacks all animals which are weakly and unable to resist, but, except with his own species, he rarely engages in serious combat. The superstition of the vulgar has endowed this bird with several extraordinary properties, and it is generally under his form that the witches appear.

CORVUS CORNIX, (*Lin. syst.*) *Crow*, *Royston Crow*, *Hooded Crow*.—This is the only species of crow constantly resident in Zetland. It builds its nest among rocks, and often on the rocky tops of hills, which are by no means of difficult access. The female seldom lays more than three eggs, the nest is made of straw and pliant tangles, and they are very much attached to their young. Although shy and cunning, if unmolested, they become very confident and familiar. In the gardens at Busta, where there are several trees of considerable height, a pair of crows annually build their nest; but in

every other part of the country they carefully conceal the spot in which they nestle. When taken young, they are easily reared, evince great sagacity, and shew a considerable degree of attachment to their feeder, whom they can distinguish at a distance.

This crow feeds almost on any thing; carrion and fish is his most favourite food, and he picks up fish from the surface of the sea, with all the dexterity of a water bird. He is a great enemy to young chickens, ducks, and goslings, and fights several battles with the cock and gander in his attempts to carry off their respective young. Shell-fish of every kind the crows are particularly fond of, and they break the shell by flying up in the air to a considerable height, and then letting it drop on the stones. In the winter-time they come very near the houses, and share with the poultry their vegetable food; but they are never seen to eat any part of it on such occasions, but carry off pieces to a short distance, and return for more, and this they repeat while any remains. I once observed a crow practising this, and I gave him no interruption until he took away the last piece. I

then marked the place where he sat down, and where he seemed to be busy in concealing something. I found seven pieces of potatoes and dough in a hole, so neatly covered over with straw and grass, that had I not seen him go to the spot, it would have been impossible to have discovered where he had deposited them.

The crows generally appear in pairs, even during winter, except when attracted to a spot in search of food, or when they assemble for the purpose of holding what is called the *crow's court*. This latter institution exhibits a curious fact in their history. Numbers are seen to assemble on a particular hill or field, from many different points. On some occasions the meeting does not appear to be complete before the expiration of a day or two. As soon as all the deputies have arrived, a very general noise and croaking ensue, and, shortly after, the whole fall upon one or two individuals, whom they persecute and beat until they kill them. When this has been accomplished, they quietly disperse.

Eagles, ravens, and crows, are less numerous at present than formerly. The commissioners of supply give a premium of three shillings and sixpence for every eagle's head, fourpence for that of a raven, and twopence for a crow's head, as an encouragement to the people to destroy them, on account of the mischief which they do to the sheep, lambs, and poultry.

COLUMBA OENAS, (*Linn. syst.*) Wild Pigeon, Stock-dove.—Large flocks of wild pigeons are frequently met with, at different times, particularly in the parish of Dunrossness, where sixteen have been killed at a shot. In winter, when the ground is covered with snow, they become very tame, and feed among the hens in the corn yards. Their nest is very simple, and is placed on a shelf, in deep subterranean caverns of the rocks, to which they constantly repair during the night. When not engaged in feeding, a favourite retreat of this bird are such portions of very high precipices as are covered with soft grass.

As the pigeons breed so frequently in the year, they almost always appear in flocks, and

when tamed display a considerable degree of sagacity.

ALAUDA PRATENSIS, (*Lin. syst.*) *Teetick*, Tit-lark.—This bird builds its nest in holes and shelves of rocks. It is very tame and stupid. It is sometimes seen on dunghills in the winter time, but, for the most part, frequents the sea shore, and feeds on insects of every kind. It never ascends into the air like the sky-lark, but flits from rock to rock, and chirps in its passage. The note is acute and twittering, totally destitute of melody.

Tit-larks are generally seen in pairs only, except immediately after the young are fledged, when different families of them are seen abroad, preparatory to their final separation.

STURNUS VULGARIS, (*Lin. syst.*) *Stirlin*, Stare, Starling.—Starlings appear in immense flocks towards the end of summer and autumn, particularly in the island of Unst. I have known forty-three killed at a shot in this latter place. They build their nests in old stone and turf dykes, and are reared with great difficulty

at whatever age they are taken. The plumage of the elder starlings, especially about the neck, is very beautiful, somewhat resembling that of a pigeon in the variety of its shades. They successfully imitate the tones of almost every bird, but have a harsh cry of their own.

FRINGILLA LINOTA, (*Lin. syst.*) *Lintie*, Linnet, Grey Linnet.—This bird builds its nest by the side of stones over which the grass grows, near to the sea. It has a very sweet note and is easily tamed. The linnets appear in large flocks in the winter time, and, together with the sparrows and snow-flakes, infest the corn-yards.

FRINGILLA DOMESTICA, (*Lin. syst.*) Sparrow, the Common Sparrow.—Sparrows are very generally dispersed over Zetland, and they are very destructive to corn while on the ground.

MOTACILLA TROGLODYTES, (*Lin. syst.*) Wren, Kitty Wren, (often called Robin Red Breast).—The wren builds its nest under stones, and in the ruins of old turf dykes. It

never sings, but utters, occasionally, a faint unmusical note.

CHARADRIUS PLUVIALIS, (*Lin. syst.*) Plover, Golden Plover.—This bird breeds in great numbers in many parts of Zetland, particularly in the island of Unst. During the breeding season they are very tame, and allow themselves to be approached within a short distance. Their note at this time is extremely sweet and plaintive, and indicates a great degree of anxiety. They are seen in great flocks during the day time on the hills, in the months of September and October; but as the evening advances, they descend from the hills, and approach the enclosures, in which they spend the greater part of the night. In winter, when the ground is covered with snow, the plovers resort to the sea-side, and feed on such insects as they pick up in the mud; but they return immediately to the hills on the slightest indication of a thaw.

Although multitudes remain in Zetland all the year through, yet I am convinced that considerable numbers leave the country during

the severity of winter; for, notwithstanding that the season has been the most favourable for breeding, and great flocks appear in autumn, the numbers seen in winter are comparatively few. It has been conceived, that on some occasions they had been blown off the coast by heavy gales of south-west wind.

CHARADRIUS HIATICULA, (*Lin. syst.*) *Sandy Loo*, Sand Lark, Ring Plover, Ring Dotterel.—This bird is met with almost on every shore, and sometimes in flocks of twenty. It lays its eggs in any slight depression on a small-grained gravelly beach, or on heath. The note is plaintive and melancholy.

TRINGA ALPINA, (*Lin. syst.*) *Sleeper*, Dunlin.—This bird frequents the more rocky shores, and is seen to be very busy feeding when the water begins to fall. On other occasions, it appears dull and heavy. Although met with at all seasons, I am not acquainted with its habits of nestling.

TRINGA CINCLUS, (*Lin. syst.*) *Purre*.—The habits of this bird are nearly the same with

those of the former. It frequents the sea-shore, particularly when there is a considerable surf on, and retires very nimbly from the coming wave. If slightly wounded, and falling on the water, it can readily raise itself and fly off.

TRINGA INTERPRES, (*Lin. syst.*) *Skirlcrake*, Turnstone, Sea Dotterel, or Hebridal Sandpiper.—This bird may be seen at all seasons of the year, but chiefly in the winter time.

Besides these already enumerated, there are other sandpipers occasionally met with, as the *Tringa Morinella*, or common turnstone, and the *Tringa Cinerea*, or ash-coloured sandpiper. Several different species of them are sometimes killed at a shot, as they frequently assemble in the same flock; but differing continually in the shade of their plumage, it is difficult to determine with accuracy on the particular species.

SCOLOPAX ARQUATA, (*Lin. syst.*) *Whaap*, Stock-Whaap, Curlew.—The curlew builds in the more retired parts of mossy hills, and is

very reserved, even in the breeding season. Its native note is wild and interesting; but when wounded, and nearly taken, it utters a scream that indicates the greatest agony. It is a very shy and timid bird, and cannot be tamed by any effort.

Curlews appear in the winter time in great flocks. They feed chiefly on insects, both land and marine, and they never leave the country.

SCOLDPAK PHAEOPUS, (*Lin. syst.*) *Whaap*, Tang Whaap, Whimbril. This bird is about one third less than the full grown curlew, but resembles the latter exactly, in the note, shape, colour, and general appearance. Their habits, however, are considerably different. The whimbril nestles in flat exposed mossy situations, as occur in the island of Hascussay, where the greatest numbers are met with. It is very bold and familiar during the breeding season, but at other times assumes the shyness of the curlew, although never so uniformly reserved. A few only remain in Zetland during the winter, the greater number migrate to some other

place. They rarely associate with the curlew, and but seldom appear in flocks.

SCOLOPAX GALLINAGO, (*Lin. syst.*) *Horse-gowk*, Common Snipe.—There are great numbers of snipe in Zetland, although they are seldom shot. The cry somewhat resembles the neighing of a horse, and hence the vulgar name of this bird. It presents nothing peculiar.

SCOLOPAX GALLINULA, (*Lin. syst.*) *Plover-page*, Jack Snipe, Judcock.—This bird is very tame, and frequents the sandy shores along with the ring dotterel. A single jack snipe is frequently seen attending a flock of plovers, and from this it has received the name of plover page.

Among the resident land birds may be mentioned the following domestic birds :

Phasianus Gallus, the common cock; *Meleagris Gallopavo*, the turkey; and *Columba domestica*, the tame pigeon. They possess nothing peculiar.

Resident Water Birds.

ALCA TORDA, (*Lin. syst.*) *Sea-crow*, Razor Bill, Auk, Marrot, Falk.—In winter, when hungry and fatigued, they come on shore, and are so indifferent to danger, that they are easily taken or stoned to death, and after bad weather, are frequently found dead on the shore. They seldom associate in the water in parties above three or four, and utter a croaking cry, not unlike that of the common crow. The female lays but one egg, and in summer this bird is lively and active.

COLYMBUS GRYLLE, (*Lin. syst.*) *Tystie*, Black Guillemot, Greenland Dove, Sea Turtle.—This bird remains the whole year on the coast of Zetland, and is seldom seen more than a mile from the land. Mr Pennant says that it lays only one egg in a nest made far under ground,* and others assert, that it cannot raise itself from the ground, and even “falls when it has six feet of height to rise from.”† It lays

* *British Zoology*, vol. i. p. 139.

† *Elements of Natural History*, vol. i. p. 201.

its eggs on the shelving parts of the rocks like the auks, raises itself very readily either from the water or from the rocks on which it sits, and when on wing its flight very much resembles that of a partridge. If alarmed, when sitting on the rocks, it throws itself, as it were, into the water, and thereby gives the idea of it falling, but this seems to proceed from an anxiety to get into the sea as fast as possible, and not from an inability to fly to any distance. The guillemot is very tame, and allows itself to be approached very near without expressing any marks of terror. Both it and the auks fly when under the water, using their wings the same as when in the air. It is readily tamed. Although apparently stupid, yet if alarmed it is very much on the alert, and if swimming, is shot with great difficulty, as it dives on the fire. This effectual evasion many of the sea fowl practise with great ease and address.

In summer the guillemot appears of a black colour, except at the coverts of the wings, which are white; but in winter the greater number of them appear of a silvery grey colour.

It has been conceived by some, that they annually change their colour, and by others, that it is the young ones only which wear the grey dress. As the guillemot is said to lay but one egg, and as all the eggs can scarcely be expected to yield a bird, there ought to be a great proportion of those who have attained the black colour, did the change depend altogether upon age, to the grey, especially as they never leave the country. This, however, is not the case, for the grey greatly predominates.

The guillemot feeds on small fish which shelter themselves under the sides of large stones. There seems to be abundance of food, for, notwithstanding the great number of them around the country, they are always fat and in good plight. The note is acute, resembling the sound emitted by a whistle.

COLYMBUS IMMER, (*Lin. syst.*) *Emmer Goose*, *Imber Goose*.—This bird appears at every season of the year. It is never seen on shore, nor observed to fly. When wounded, it endeavours to escape by flapping on the surface of the water, and it then utters a plaintive melancholy

note. It dives with great ease and elegance, and can remain long under water at a time. It grows to a great size, generally weighs from ten to twelve pounds, and is covered with a profusion of fine down.

Neither the place where this bird breeds, nor its manner of hatching are known; nor do the general opinions entertained on the subject appear to me to be at all satisfactory. The difficulty has been conceived to be obviated by the statement of Horrebow, that being never molested, "they build in remote places, near fresh water."* In a country, however, where down forms so considerable an article of annual export, it is not likely that so valuable a source of it would be neglected for the mere trouble of seeking for it, and it is therefore more probable, that either Horrebow had mistaken the bird, or that it had eluded the search of its pursuers.

The assertion, that the imber goose cannot fly, has not, I think, been sufficiently well established. The wings are small, it is true, com-

* Natural History of Iceland.

pared with the body, but they are not less in proportion to its bulk, than those of the eider duck, which has a strong and rapid flight. It is so perfect a diver that there seldom appears any necessity for flying. I have repeatedly seen the shag and guillemot prefer diving to flying when pursued, nor could any effort induce them to rise from the water. The feet of the imber are inserted in the same manner as in the grebe tribe, which appear but ill calculated for it resting on the ground, but with its faculties of accommodation in this respect we are unacquainted. I have repeatedly seen, in the months of June and July, birds which, at the distance of two hundred yards, I took to be imber geese, rise from the water and fly along its surface, and nothing but the prevailing belief to the contrary, induced me to think that I was mistaken. I recollect being particularly struck with the small size of the wings.

As imber geese are seen in Zetland at all times, we are led to infer, either that they breed in this country, or possess the means of easy removal to another. To leave a place where food abounds, to swim across the north-

ern ocean, and to fish during the passage in several hundred fathoms water, would not only be a perversion of instinct, but an undertaking which scarcely any bird could accomplish, and which would necessarily occupy several months in effecting it. On the other hand, their places of retreat have never been discovered; and although many of them, in the beginning of winter, are obviously of a less size than others, yet all appear to be perfect and complete birds. It therefore appears to me, that the *Colymbus immer* can fly, but that it uses its wings only at particular seasons of the year.

The *Colymbus Glacialis*, or Great Northern Diver, as exhibited in museums, and described and figured in books on ornithology, has never, so far as I know, been seen in Zetland.

PELECANUS CARBO, (*Lin. syst.*) *Brongie*, *Scarf* (Scarf of Pontoppidan), Corvorant, Cole Goose, or Great Black Cormorant.—This bird has been endowed with various properties, and extraordinary habits. It is said to be particularly fond of carrion, to build its nest in trees, and to possess a pocket into which it deposits

fish to be eaten at leisure. The first opinion has been repeatedly and successfully refuted. In Zetland, Orkney, and the Hebrides, the cormorant forms its nest on the shelves of rocks, and is never seen to rest upon grass, unless in the immediate neighbourhood of rocks. Indeed the large web feet of this bird are but very ill calculated for sitting upon trees. From being included in the genus *pelecanus*, I presume it has been inferred, that the cormorant was provided with a pouch into which it deposited what part of the food it could not immediately swallow. There is, however, really no such apparatus, but merely a dilatable pharynx which leads directly to the stomach, and this bird frequently swallows certain kinds of fish, as the father lasher, and gurnet, head foremost, which, from the direction of the bones, it could not possibly disgorge.

This bird is not very numerous in Zetland. It has a voracious appetite, and generally feeds on small fish which it catches near the shore, but seldom fishes in fresh water. They are not gregarious, but are met with sitting on rocks along with other birds of the same genus.

The cormorant is easily tamed, and is by no means disposed to be readily alarmed.

PELECANUS CRISTATUS, (*Lin. syst.*) *Lorn*, (Huidlaaring of Pontoppidan), Crested Corvorant.—This bird has been confounded with the former, and doubts have been entertained whether it was the male or female of the pelecanus carbo. The discriminating marks between them, however, are sufficiently numerous and decided, to enable me to state that this is a distinct species.

The brongie, when full grown, is larger than the lorn. The former is of a dusky brown colour on the back, the latter of a shining black, and the lorn has a large white spot on the thigh, which no age nor change of plumage produces on the other. In their habits they are also very different. The crested corvorant is rather more numerous than the great corvorant, with which it never associates. It is shy and reserved, seldom feeds in frequented places, and is not so voracious as the former.

The crest from which this bird has derived its name, although never met with in the bronze, frequently occurs in the pelecanus graculus or common shag, and therefore by no means forms a distinctive character. But the white spot on the thigh is perfectly peculiar, and is never seen on any other species of this genus. The pelecanus cristatus should, on this account, be called pelecanus *albi-femur*.

PELECANUS GRACULUS, (*Lin. syst.*) *Scarf*, Shag, Scart, Green Cormorant.—This bird is very numerous in Zetland, and shags are seen in very large flocks, both sitting on the rocks and swimming in the sea. It fishes either singly, or in flocks, and appears to be intermediate between the two former species. It is very voracious, and devours vast quantities of sillocks. The female lays two eggs, and forms the nest on the shelves of high rocks. It is very bold and affectionate at this time. The young ones are easily tamed, and are docile, sagacious, and affectionate. They soon are taught a kind of song, which they readily sing when meat is presented to them, and after having remained some weeks in con-

finement, they shew a dislike to quit their new mode of life. I have known a scarf go several miles from the house during the day, and fish along with a flock of wild ones, and regularly return at night as tame and familiar as if it had never gone abroad.

The shag, during the first year of its age, is of a dirty grey colour, which afterwards changes to a shining greenish black; and, in a flock, a few can be seen with large crests. Having observed that those among them which had crests, were more glossy and shining in the plumage than the others, I was led to conjecture that it might be a distinct species, but I am disposed to believe that the appearance is accidental.

It is said that the shag, as well as some other diving birds, when wounded, and feeling themselves in articulo mortis, grasp a tangle, and soon after die. I have frequently seen these birds after being severely wounded, dive, and notwithstanding the most active search, never appear again. A gentleman informed me, that having, on one occasion, wounded a scarf in

shallow water, with a sandy bottom, he could easily observe its movements under water; and he saw the bird repeatedly catch at different things which lay on the bottom, and all of which yielding, it soon after floated up dead.

Great numbers of this species of the corvo-rant, are sometimes taken during the night, while asleep on the rocks, and the mode of accomplishing it is very ingenious. Large flocks sit during the night on projecting rocks of easy access, but before they commit themselves to sleep, one or two of the number are appointed to watch. Until these centinels are secured it is impossible to make a successful impression on the main body; and to surprise them is therefore the first object. With this view, the leader of the expedition creeps cautiously and imperceptibly along the rock, until he get within a short distance of the watch. He then dips a worsted glove in the sea, and gently throws water in the face of the guard. The unsuspecting bird, either disliking the impression, or fancying from what he conceives to be a disagreeable state of the weather, that all is quiet and safe, puts his head also under his wing

and soon falls asleep. His neck is then immediately broken, and the party dispatch as many as they choose.

ANAS BOSCHAS, (*Lin. syst.*) Stock-Duck Mallard, Common Wild Duck.—This bird remains during the whole year, and frequents the lakes and heads of the more retired bays. In autumn large flocks feed on the corn during the night time. It is a very shy bird, and is easily alarmed. The eggs of this bird have been put under a tame duck, but the young have always been very wild, and it was not until after they had gone through successive generations, that they were completely domesticated. This bird, in its plumage and size, exactly resembles the tame duck.

ANAS QUERQUEDULA, (*Lin. syst.*) Garganey.—This bird is, I believe, known in Zetland by the name of the teal. It is considerably larger, however, than the teal, but resembles it very much in the plumage. The female is nearly of the same dusky brown colour as the stock-duck, and has the same cry. The habits of both are much the same. If the bird I allude

to be not the garganey, it is a new species. The true teal does not occur in Zetland.

ANAS CLANGULA, (*Lin. syst.*) *Gowdy-duck*, Golden-eye.—This beautiful bird is met with in several places. It is not so delicate and well flavoured as the former. The chief resort of the golden-eye is in the fresh water lakes, and it feeds on insects and small fishes.

ANAS FERINA, (*Lin. syst.*) *A-teal*, Pochard, Great-headed Widgeon.—Great flocks of the pochards are to be seen in winter, swimming in the bays; and they utter a shrill cry as they fly through the air. This bird is larger than the former.

MERGUS CASTOR, (*Lin. syst.*) *Herald-Duck* or Goose, Dun-diver.—This bird is sometimes called *mergus serrator*, from the serræ in its bill. They are very numerous in Zetland, and never quit the country. The male is a beautiful bird, but the female is of a dusky brown colour. They taste very much of fish, and are seldom eaten.

LARUS MARINUS, (*Lin. syst.*) *Swabie, Baw-gie*, Swartback, Great black and white Gull.— This bird, although very generally dispersed over the country, is not very numerous. They build their nests on high holms, or stacks, and on the shelves of the more inaccessible rocks. When they happen to fix on a holm covered with grass, as Maiden-Skerrie in Northmaven, they occupy it themselves, and prohibit the approach of any others, even of their own tribe. This gull is shy and reserved, except during the breeding season, when it darts down with great velocity, and comes so near, as almost to strike the person who is approaching the residence of its young. The very appearance of a gun or stick, which are sufficient to alarm it on other occasions, are then totally disregarded, and it is frequently shot when within but a few feet of the muzzle of the gun.

In the affectionate care of their offspring, these gulls display great sagacity and even foresight. When the cradle at Noss is about to be slung, the gulls, aware of the approaching capture of their young, are unremitting in their efforts to carry them off. From the first mo-

ment that they observe preparations making to enter the holm, they become noisy and restless,

——— and chide, exhort, command,
Or push them off,

so that if bad weather delay the arranging of the cradle, but for a few days, scarcely any are left to be taken away.

This bird is a great enemy to the fowler, by intimating to other birds his approach. One of them is an inseparable attendant on the scarfs, when they assemble on the rocks for the purpose of drying and resting themselves; and they seem sensible of the good offices of this voluntary guardian, by quietly receiving it among them, and obeying its friendly admonitions. On the approach of a person from the shore, or of a boat, the gull having first testified marks of anxiety and apprehension, flies off before either have approached within gunshot, and all the scarfs, except those who are young and unexperienced, follow. It not merely contents itself with giving them warning in due time, but urges their departure by repeated

calls, and sits down in the water, at a considerable distance from the spot from which it fled, as if intending to point out the place where they may consider themselves in safety; and they generally all repair to the same place. To the seal this bird is of essential service. These animals frequently lie upon the rocks for hours in succession, and so well acquainted are some sportsmen with their haunts, that they raise small bulwarks, or *rests*, to conceal their approach, or wait their arrival behind a rock. The gull, however, frustrates all these precautions, by first flying over the head of the hunter, and then screaming close to the seal; and, when the latter is not disposed to avail himself at once of this friendly intimation, I have known them strike him on the head with their feet. As soon as he slips into the water they appear to be perfectly satisfied, as if they then conceived him in a situation to protect himself.

There is a certain degree of dignity and reserve about this bird, in its appearance and habits. It generally sits on a commanding eminence, and seldom cries, except when its young are in danger. Even when hungry, it is

never disposed to venture on those scenes of open danger, which the common gull is at all times ready to encounter. It sometimes sends forth a deep groan, but the usual sound is "ka—wa—wa," rather faintly uttered. They never flock except when accidentally assembling in quest of food.

This bird often grows to a great size. I have seen one that weighed seven pounds, and measured upwards of six feet between the tips of the wings. It is very fierce and voracious, and has been seen to lift up a young lamb by the tail in its bill, and carry it off.

There is a bird which resembles this gull in every respect but that of size. It is less by about two feet, and not so heavy by several pounds. It has received the name of *larus glaucus*. Mr Pennant has described such a bird; and there is an excellent specimen of it in the possession of P. Walker, Esq. of Edinburgh. The black-backed gulls in Zetland vary very much in point of size.

LARUS FUSCUS, (Lin. syst.) Blue-backed Gull or Great Maw, Herring Gull.—This bird, though not so large as the former, is more uniform in its size. It is described by ornithologists as differing in weight from the black-backed gull by several pounds. I should think this to be too great a difference. I have indeed seldom compared them accurately in this respect, but I am disposed to believe, that the full grown of each, would not differ by more than one pound or a pound and a half. The word *fuscus* conveys an erroneous idea of its colour. The breast, head, and neck, are of the most perfect white, and the back of a uniform light blue.

This bird, in its general habits, resembles the large black-backed gull, though it has some peculiarities. They are rather more numerous than the black backs, but never, like them, associate together in groupes during the breeding season, nor do they generally build their nests in places of such difficult access. Like the others, they are very bold and clamorous when any danger approaches their young, but are not so entirely indifferent to danger.

Of all the birds which instinct prompts to alarm others, this gull is the most conspicuous, and the greatest enemy to sportsmen; and it seems to consider itself the natural guardian of the coast. If it spies a person at a distance, walking in a cautious manner, in the neighbourhood of any bird, it instantly repairs to the spot, and by a keen acute cry, different from the common note, endeavours to inform it of the approaching danger. Ducks and curlews know the hint quite well, and almost always take advantage of it, and fly off long before the fowler can arrive within gun-shot of them. On these occasions it often comes with a sweep, as if intending to strike the person, who by that means is kept in a state of constant alarm and irritation; but if it do not immediately fly off, after having succeeded in accomplishing the object of its mission, this officious interference not unfrequently draws the vengeance of the fowler on itself, and it falls the victim of its own good intentions. This gull is not satisfied with having alarmed birds on any particular occasion. It does indeed fly to a distance and sit down, but after its anxiety has been once roused, it never loses sight of the fowler, but

follows him at a distance wherever he goes; and, unless by pretended inactivity, the sportsman can quiet the apprehension of his enemy, it is in vain to think of getting within reach of any bird that is naturally shy and of a timid disposition. The scream of this bird is peculiarly wild, and indicative of anxious impatience.

LARUS CANUS, (*Lin. syst.*) Mew, Common Gull or Mew.—This is the most common gull in Zetland, yet but few breed in the country. Their habits of nestling are the same with those of the great blue-backed gull. Their young have precisely the same colour, and differ only in size. The change of colour seems more rapid in them than in the former two, which may be occasioned, perhaps, by their going to more northerly regions. They retain, however, certain black or grey streaks on the head much longer than the others.

This bird feeds a good deal in the fields, and in spring it attends the plough, and feeds on the worms which it turns up. Great flocks of

them are seen practising this at the same time. I suspect that the *larus hybernus*, or winter gull, is merely a variety of the common gull; for, making allowance for occasional changes of manners, according to external circumstances, the same habits, size, and general appearance, apply to both.

LARUS NÆVIUS, (*Lin. syst.*) *Scorie*, *Wageh*, Great Grey Gull or Burgomaster.—This bird has been usually described as a distinct species, and as such, it has received a specific name. It has also been confounded with the *larus parasiticus*,* or arctic gull, which it does not resemble in any respect. It is, however, nothing but the young of the great black-backed, blue-backed and common gulls, and therefore does not deserve a distinctive appellation in the nosology of naturalists. When in the nest, and even long after they are fledged, it is impossible, on a superficial examination, to ascertain to which particular gull the scories really belong. By degrees, however, they assume the shade of the parent stock.

* *British Zoology*, vol. ii. p. 141.

The precise time which they take to change, their colour entirely, has not been ascertained, but a very considerable progress is observed to have been made towards the end of the third year. This has been ascertained by taking their young and keeping them several years in a garden, during which time the change had been so nearly effected, as to lead to the belief that it would have been soon completely accomplished.* Although it be difficult to appreciate the particular age in the different individuals, yet they are seen in Zetland in every stage of this change. The head is the last part which loses the grey colour and becomes white. The feathers on the fore part of the body change first. The feet and bill, which are black when young, also undergo a change of colour. The latter becoming yellow, and the former of a flesh colour. I have no doubt that an accurate ex-

* Mr Walker of Edinburgh who possesses the most extensive collection of British birds in this country, has observed the progress of this change, from the time the bird came out of the shell, until nothing of the scorie was left but a few black streaks on the head. There is a specimen in his collection which illustrates this fact, and the period in which the change was effected was three years.

amination would determine, even in a progressive state, the discriminating qualities of each; but as this has never been done, the appearance of blue or black feathers on the back, with the general difference of size, are the only indications of the particular species to which the scories belong. The cry of the scorie has no resemblance whatever to that of the parent gulls; and they are never known to breed as scories, and, as long as they remain in that state, are remarkable for their stupidity and insensibility to danger.

It thus appears, that the three species of permanent gulls, the great black, and blue-backed gulls, and the common gull, produce the wigel or scorie, as their common young, which differs in size, according as it is the immediate offspring of these respective individuals; that the period of change in the colour is not uniform and steady, but is modified by external circumstances, but that evident marks of it commence between the second and third years of the bird's age; which, however, never appears to acquire all the faculties and instincts

of the species, until this change has been fully completed.

To the list of resident water birds may be added, the *Anas Anser Domesticus*, Tame Goose, and the *Anas Domestica*, Tame Duck.

Migratory Land Birds.

RALLUS CREX, (Lin. syst.) Corn-Crake, Land-rail.—This bird regularly visits Zetland every summer, but it is rarely ever seen. It is the harbinger of returning life and vegetation. It is somewhat extraordinary, that a bird of so weak a flight should travel so great a distance. They regularly leave the country towards the end of summer, for no trace of them has ever been discovered in a state of hybernation.

ARDEA MAJOR, (Lin. Syst.) *Hegric*, Heron, Heronshaw.—This bird has been generally reckoned among the water birds; but with the exception of feeding on the shores of the sea, it has nothing in common with them. The herons come to Zetland regularly, about the

middle of autumn, and leave it towards the end of spring. A few individuals occasionally remain the whole year. They are sometimes seen in pairs feeding at a considerable distance from each other; generally, however, they appear as single birds. There is a small holm between Yell and Hascussay much frequented by them. I have seen sixteen rise at a time from this place. They never flock, but appear to assemble with a view to individual accommodation, for, when alarmed, they rise up in succession.

ALAUDA ARVENSIS, (*Lin. syst.*) Lavrock, Skylark.—The lark makes its appearance early in spring, and remains during the summer and autumn, but I never saw any in the winter time. This bird has not been generally supposed to be migratory, and it is never seen to fly far at any particular time. Although, in general, very gregarious in winter, they are never observed to flock at the other seasons of the year; and in Zetland seldom more than a single family is met with at a time.

TURDUS PILARIS, (*Lin. syst.*) Feltifare, Fieldfare.—Fieldfares visit Zetland every severe winter, and remain in it a considerable time. They seldom appear in considerable numbers in the same place, although sometimes a dozen are met with together.

EMBERIZA NIVALIS, (*Lin. syst.*) *Snow-Fowl*, Snow-Bunting or Snow-Flake.—Snow-flakes appear regularly in large flocks every winter, but leave the country on the approach of spring.

EMBERIZA CITRINELLA, (*Lin. syst.*) Yellow Bunting, Yellow Hammer.—Buntings appear pretty generally during winter, in small parties of about eight or ten.

MOTACILLA RUBICOLA, (*Lin. syst.*) *Stane-chaker*, *Stinkle*, Stone-chat.—Stone-chats are seen only in pairs during the breeding season, and are regular in their migrations. This bird builds in enclosure walls, and the people entertain a belief, that whoever robs its nest will be affected with sickness soon after.

MOTACILLA BAARULA, (*Lin. syst.*) Water-Wagtail, Grey Wagtail.—This bird is seen only during the breeding season, in a very few places, particularly in the island of Unst.

HÆMATOPUS OSTRALÉGUS, (*Lin. syst.*) *Chalder*, Oyster-Catcher, Sea-Pie.—This bird appears to be the connecting link between the land and water birds. It never is seen to go on the water from choice, and it always feeds on the shores; but if wounded so as to fall in the water, and pursued, it dives with great ease and rapidity. Great numbers of chalders come annually to Zetland in spring, and leave it again at the end of summer. A few often remain all the year round. It is never seen to pick up shell-fish from the bottom, but to detach those species of them which either adhere loosely to the rocks, or open themselves when the sea retires. The limpet is the chief and almost only food of this bird; the oyster it can neither catch nor open, and it has therefore been very improperly named oyster-catcher.

The chalders construct their nests on tufts of grass which grow among rocks, and some-

times lay their eggs on the open beach. Their cry is shrill, though by no means disagreeable.

Migratory Water Birds.

ANAS MOLLISSIMA, (Lin. syst.) Duntèr-duck, Eider-duck.—The eider-duck appears in considerable numbers in the month of May, at first in flocks, but afterwards in single pairs. On their first arrival they are very tame and familiar, and often rest themselves in the neighbourhood of houses. This appears to confirm the statement of Von Troil, that in Iceland, and also in Feroe, they are treated with great kindness by the inhabitants. They nestle in very exposed places of small islands, but do not provide their nests with so large a proportion of down as has been alleged. They generally leave the country towards the end of summer, although, in a few places, it is said that they remain during the whole year. They always fish in deep water, and are the most familiar of the duck tribe.

ANAS GLACIALIS, (Lin. syst.) Calloo, Long-tailed Duck, or Swallow-tailed Sheldrake.—

Calloos visit Zetland in large flocks, about the middle of October, and leave it in the month of March. They are met with in almost every bay; but never remain the whole year. This bird feeds on fish near the land, but is seldom seen on shore, except when sick or wounded. When assembled in a large flock, in a fine day, they are very playful, and utter an agreeable note.

ANAS CYGNUS, (*Lin. syst.*) Swan, Wild Swan.—Large flocks of swans visit Zetland annually, both in spring and in the end of autumn. They rest generally on the large and more unfrequented lakes, and sometimes in the bays. During the day time they keep in the middle of the lake, but towards evening approach the banks, and feed on insects. They are frequently shot, by employing a horse as a decoy. The fowler leads the horse along the bank of the lake, carefully keeping him between the swans and himself, until he arrive within the proper distance. They are sometimes taken in calm weather, being unable, without the aid of a breeze of wind, to rise from the surface of the water. The real tame

swan is sometimes killed in Zetland, as appears from the discovery of certain marks on the feet.

Swans almost always fly at a great height from the ground, and proceed either in a straight or crooked line, but never in a tumultuous flock; and in their flights they utter a kind of song, probably to cheer each other on the passage. Frequently they fly over the country without ever waiting to rest themselves; but when they do alight, they generally repose for some days. A few swans have been known to spend the winter in the loch of Scousburgh in the parish of Dunrossness.

ANAS FUSCA, (*Lin. syst.*) Velvet Duck.— This bird is occasionally met with in some of the less frequented bays during winter; and as it appears to come with different kinds of wind and weather, I conclude that it is migratory. Indeed, it may be received as a fact, that all the more perfect and vigorous water fowls, which both dive and fly, seldom remove from one place to another, but from choice.

ANAS ANSER, (*Lin. syst.*) Wild Goose.—Considerable flocks of wild geese sometimes appear in Zetland, but they are less regular in their visits than formerly. I once shot one. It exactly resembled the tame goose in its plumage, but it was not nearly so large.

ANAS ERYTHROPUS, (*Lin. syst.*) The Bernacle Goose.—This bird is frequently confounded, both with the white fronted goose and the brent goose. The bernacle is comparatively rare, and has been seen chiefly in the island of Unst. It appears only during winter and spring.

ANAS TADORNA, (*Lin. syst.*) Shieldrake.—Although this bird is very common in Orkney, it is but seldom seen in Zetland. Pairs of them are seen occasionally, during winter, but they seldom remain long at a time. Formerly they were much more numerous and regular in their appearance. This bird is known in Orkney by the name of sly goose, but a very different bird receives that appellation in Zetland.

ALCA ARCTICA, (Lin. syst.) Taminoric, Puffin, Coulterneb, Sea-parrot.—This bird breeds in great numbers in Zetland, to which they repair in the month of May. They build their nests in long holes, under stones, at the upper parts of high rocks. Great numbers of the full grown birds are taken soon after their arrival, by a person coming suddenly on the hole, and introducing a stick with a hook fixed to the end of it into the nest. The bird is then forcibly dragged out, and this cruel custom is practised yearly in Unst. They are never seen after the month of August.

The puffin sits on shelves of the rocks, and walks on the whole length of the leg; before rising, it takes a short leap, and appears to take wing with great ease, and flies with amazing force and velocity. This bird is never seen to feed near frequented places, but always resorts to deep water in the neighbourhood of high rocks.

ALCA ALLE, (Lin. syst.) Rotche, Greenland Rotche.—This bird appears regularly every winter, never in flocks, and seldom even in

pairs. They appear to feed on some species of shell fish, for, although they fish in deep water, yet they confine themselves long to a single spot, and dive and come up repeatedly within a few feet of the same place.

PROCELLARIA PUFFINUS, (*Lin. syst.*) *Lyrie*, Manx Petrel, Manx Puffin, Shearwater.—The lyries come to Zetland during summer in considerable numbers, and are seen frequently skimming the surface of the sea. Their habits of nestling are the same as the sea-parrot. The young become excessively fat, and are esteemed a great delicacy by the climbers.

PROCELLARIA GLACIALIS, (*Lin. syst.*) Mal-limouk, Fulmar.—The fulmars are pretty regular in their visits during the winter, but they do not breed in the country.

PELECANUS BASSANUS, (*Lyn. syst.*) Solan Goose, Gannet.—This bird comes to Zetland in the summer time in search of the herring fry, and in winter for the sillocks. Some years ago they were very numerous during winter, and

were frequently shot. They do not breed in Zetland.

COLYMBUS TROILE, (*Lin. syst.*) *Longie*, (Lomgivie of Pontoppidan,*) *Guillemot*, Foolish Guillemot, Sea Hen.—They appear in great numbers in summer, and breed on the flat shelves of high rocks. They lay only one egg, and numbers arrange themselves on the same shelves, so that they present an appearance resembling a company of soldiers drawn out on parade. The climbers affirm, that they agree so well among themselves, that the whole eggs in any particular range are occupied in common, and if a female gets an egg to sit upon, it matters little to whom it belongs.

This bird is extremely tame, and utterly insensible to danger. Provided a person can get sufficiently near to the shelf on which the longies sit, he may take as many as he chooses. The following is a very common method of taking the female guillemot. A climber provides himself with a long slender rod, to which is attach-

* *Natural History of Norway 1751, part ii. p. 82.*

ed a line of black hair, a noose is formed upon the end, which communicates with the line in his hand. Having gained a convenient station, he cautiously puts forward the rod, and endeavours to include the head of the bird within the noose, which he generally accomplishes with ease. The guillemot appears to be fully aware of the art that is practising on it, and endeavours to withdraw its head, or turns the line with its bill over its head, but seldom flies off, nor does the capture of one alarm the rest. Several hundreds have been caught in this manner in a day. The male is more alert. He will not permit the rod to approach his neck, and it requires great perseverance and address to fix it round his foot; but many, notwithstanding, suffer themselves to be taken in this latter manner.

This bird is easily domesticated, appears to know the person who feeds it, and although it swims in the sea, and even goes off to a considerable distance, regularly returns back to the place of its residence.

COLYMBUS SEPTENTRIONALIS, (*Lin. syst.*)
Rain Goose, Red-throated Diver.—This bird

breeds annually in Zetland, in small islets, and along the banks of small lakes in which long and thick grass grows. The nest is carelessly formed, and the eggs are removed but a short distance from the water edge. The eggs are sometimes taken, but the young are seldom captured. This bird flies very high, and generally utters in its flight, a croaking shrill sound. They are never seen but singly, or in pairs, and leave the country as soon as the breeding season is over.

COLYMBUS STELLATUS, (Lin. syst.) Sly Goose, Speckled Diver, or Speckled Loon.—A few breed in Zetland, in small islets or holms in the lakes which are inaccessible, and which are remote from any human habitation. It is very reserved, and has received its name from the rapid and evasive manner in which it dives. This bird is very tenacious of life.

LARUS RISSA, (Lin. syst.) Kittiwake, Annett.—During the summer season, this is by far the most numerous of the gull tribe, and they are purely migratory. After their arrival in the end of spring, they spend several days in

sitting on the water in the neighbourhood of the rocks on which they intend to build their nests; and the same rocks which were occupied the former year, are regularly tenanted the succeeding one. Rarely indeed are new places selected. They build in mural precipices, which they occupy to the exclusion of every other bird; the general height at which the nest is placed, is ninety feet above the level of the sea. Many, however, are much higher. Their nests are made of straw, bent, and long grass, which they gather with the most persevering assiduity. Near Burrafirth in the island of Unst, which is the place in Zetland that is most frequented by them, and which is in the immediate neighbourhood of an extensive lake, this operation is daily practised by multitudes during a considerable period.

The extremes of heat and cold are alike fatal to the young brood. If cold northerly and easterly winds come on during incubation, the birds are destroyed in the shell, and never appear; and the heat of 1808 literally scorched many thousands. This last summer was a very favourable season for them. The kittiwake

is easily domesticated, and feeds indifferently on vegetable food or fish, although it prefers the latter.

There is generally a considerable number of them, which, not paring, are called *yield kittiwakes*. They associate together, and sit upon rocks apart from the others. When the period, however, of leaving the country arrives, they join the general assembly, and all set off in a body. Some days previous to the departure of the kittiwakes, they are observed to exercise themselves, and to wait for a favourable opportunity of south-west wind to set off with. If they miss a particular occasion, by not being all ready, they wait often a week, and even a fortnight, so that they may all go together, leaving behind them such only as are weak, or have been late in being brought forth. These never attempt to go away, and endeavour to accommodate themselves to the country in which they are compelled to remain.

The kittiwake, during the first, and perhaps the second year of its age, has a ring of black feathers round the under part of the neck,

where the shoulders commence. The greater and lesser coverts of the wings are also black; but this colour changes after that period for the pale blue; so that, with the exception of the black bill and black feet, it is not easily distinguished, on a superficial examination, from the common gull. Those kittiwakes which remain in Zetland during winter, are observed to be but slightly changed in their plumage in the summer following, but all those which come for the purpose of breeding, appear to have undergone the perfect change; so that either the change of colour is more rapidly effected by the influence of a more northerly climate, or some years elapse before they are competent to the faculty of generating their species.

LARUS PARASITICUS, (*Lin. syst.*) Scoutiallin, *Shooi*, Arctic Gull.—Great numbers of scoutiallins breed during summer in Zetland. They construct their nests on low, wet, mossy heaths, on very exposed situations. When threatened with a discovery by men or dogs, they sometimes have recourse to the same stratagem which the heath plover and lapwing employ,

of flapping with their wings, and fluttering along the ground, at a distance from the nest, in order more effectually to mislead. When, however, a person actually approaches the nest, it becomes very bold and fierce, and strikes severely with its feet and bill.

The general appearance of this bird is neat and elegant, and the gait is graceful and dignified. Its note very nearly resembles that of the kittiwake, but is rather more plaintive. This is one of the boldest and most familiar of the gull tribe. He fears no bird, nor ever hesitates to attack any animal, of whatever size, that approaches his nest. In those situations where the allins breed in considerable numbers, no bird of prey is suffered to approach. If, either by accident or design, any individual of that class be seen, the whole assemble, attack, and compel him to retire. In the island of Hascussay, where the allins are perhaps more numerous than in any other part of the country, they are the guardians of the young lambs, which the people consider perfectly safe during summer; and, in return for this protection, the allin enjoys the most perfect immunity from plunder

or violence of any kind, being held in no less esteem there, than the stork is in Holland.

With respect to what has been said regarding the circumstance of this bird pursuing the common gull, and obliging it to disgorge part of its food, it appears more probable than the opinion, which supposes that the latter is hunted down for its excrement. All the gull tribe possess the faculty of vomiting easily what they have swallowed; but to suppose that they have a power over digestion, is to admit a violation of the natural and ordinary habits of all animals. The common gull, however, is not the only individual which the allin pursues with this view. The kittiwake and tarrack are also compelled to acknowledge his superiority, but he never attempts either the great black, or blue-backed gulls.

LARUS CATARACTES, (*Lin. syst.*) *Skooi*, *Bon-
nie*, *Skua Gull*.—This bird breeds only in the islands of Unst and Foula. It is nearly of the size of the black-backed gull, but shorter and thicker about the neck. The plumage is a mixture of brown and black, not unlike that

on the erne. It forms its nest on the bare heath, and is remarkably bold during the breeding season, not only striking those furiously, who approach its nest, but pursuing them to a considerable distance from it. The flight is more rapid and strong than that of any of the other gulls.

This bird feeds only on fish. It accompanies the boats to the haaf, and is considered a very lucky bird by the fishermen, and held in great veneration by them. The skua gulls are generally seen in pairs, and never associate with any of the other gulls.

LARUS RIDIBUNDUS, (*Lin. syst.*) *Hoody-Crow*, Black-headed Gull, Black Cap, or Pewit Gull.—A few pairs of this gull come regularly every year to Zetland during the breeding season. They frequent the flat gravelly shores of deep bays, appear familiar, and are very seldom molested. They feed chiefly on insects, and frame their nest on green tufts which border the shores which they frequent.

STERNA HIRUNDO, (*Lin. syst.*) Pickatarnie, Tarrack, Common Tern, Sea Swallow.—The tarracks visit Zetland in considerable numbers annually; but they remain in it during the breeding season only. They form their nest in islands, on small-grained gravelly beaches. This bird is very bold and familiar, and feeds chiefly on the young fry of the coal fish, which it discovers from a considerable height in the air, and darts down, like the gannet, to a depth of several feet.

The terns leave Zetland generally in the month of September, and, for several days before they take their departure, assemble in considerable flocks on the borders of lakes, and on little islets in them. No individual is ever seen during winter.

Accidental Land Birds.

CORVUS CORONE, (*Lin. syst.*) Carrion Crow, Midden Crow, Black-nebbed Crow.—This bird sometimes appears in winter, but very seldom, and only in single birds.

CORVUS FRUGILEGUS, (*Lin. syst.*) Rook.—This bird is seen sometimes in Zetland, but very seldom. Formerly rooks were frequently seen, and even bred in the country.

MOTACILLA REGULUS, (*Lin. syst.*) Crested Wren.—This bird has been occasionally, though seldom, seen in Zetland.

TURDUS MERULA, (*Lin. syst.*) Blackbird, Black Ouzel.—This bird is never seen but in winter, when it appears to have been forced thither by bad weather, and it leaves the country again as soon as a favourable opportunity offers.

MOTACILLA RUBICOLA, (*Lin. syst.*) Robin Red-breast, Red-breasted Robin.—This bird is but seldom seen; but the name of robin red-breast is generally given to the wren.

HIRUNDO RUSTICA, (*Lin. syst.*) House Swallow.—I saw two swallows in Zetland in the summer of 1808. The weather was uncommonly fine, but after remaining a few days, they went off without building any nest.

ARDEA GARZETTA, (*Lin. syst.*) Crested Heron.—This bird has been shot in Zetland. It appears, however, very seldom.

ARDEA GRUS, (*Lin. syst.*) Common Crane.—Several cranes came to Zetland in the winter of 1807, and remained a few weeks in the country. They fed on the fields, and were by no means wild. One of them was shot. The wind, for some days preceding their arrival, had been from the east, but it had not blown particularly strong.

SCOLOPAX RUSTICOLA, (*Lin. syst.*) Woodcock.—This bird has been seen repeatedly in Zetland, and one was shot not long ago.

SCOLOPAX CALIDRIS, (*Lin. syst.*) Red Shank, Pod Snipe or Sandcock.—This elegant bird occasionally visits Zetland, and generally feeds among the sanderlins. I shot one in 1808.

TRINGA VANELLUS, (*Lin. syst.*) Pee-wit, Lapwing.—This bird was frequently seen some years ago. They were wont to breed in the

island of Unst, but I do not believe they have done so lately.

Many other birds might be included in this list. Winter is the season when these strangers visit the country, and they are generally forced to it by bad weather, but few are able to distinguish them, or give accurate details respecting their size, colour, or specific characters. On this account, many birds are seen whose names are unknown, and whose appearance is not therefore recorded.

Accidental Water Birds.

COLYMBUS OBSCURUS, (*Lin. syst.*) White and Dusky Grebe, Lancashire Grebe.—Different species of grebes occasionally visit Zetland during winter. When lifted out of the water after being shot, nothing can surpass the silvery lustre of the plumage on the breast.

PROCELLARIA PELAGICA, (*Lin. syst.*) Stormy Petrel, Mother Carey's Chicken.—This inhabitant of the stormy sea has been seen repeatedly near to Zetland, and it is said that it some-

times builds its nest in Fair-Isle. It is surprising that so small a bird should delight in storms, and so easily brave the tempest, when the more vigorous and larger water-fowls sink under its influence, or fly from its fury.

From this view of the ornithology of Zetland, it appears, that of the land birds, those included in the Linnæan orders, Grallæ and Passeres, are the most numerous. Of the Accipitres and Picæ the numbers are very few. Of the Anseres, or water-fowl, however, there is not only a great number of individuals, but also a considerable variety, both in the species and genera.

The chief causes of migration among birds, from one country to another, seem to be, the search after a climate congenial to their feelings, food, and a convenient situation for propagating and rearing their species.

Some birds remove from the northward to avoid the severity of the winter's cold. This is the case with several of the arctic birds, as the fieldfare, calloo, and Greenland rotche.

The sky-lark and stone-chat appear to leave Zetland with a similar intention; and yet one would think that the former could scarcely attain this object by a removal to the northern parts of Scotland only, where multitudes of them winter. The land-rail seeks for a temperate climate, and it removes south as the summer draws to a close.

The turrack, kittiwake, and some others, come for the double purpose of obtaining food and propagating their species. As the former feeds only on small fish which swim near the surface, there would be no subsistence for it during winter, when the coal-fish become large; and so powerful is the instinct to quit the country, that not a single individual has been known to remain during winter, except when tamed and regularly fed. The kittiwake, which is a larger and a stronger bird than the turrack, experiences this inconvenience, and is frequently seen making ineffectual attempts to catch the sillocks. The diving birds more readily accommodate themselves to a yearly residence, as they can derive their food from different sources, and, with a very few exceptions, they

are less scrupulously observant of particular days, either at their arrival, or for their departure. The oyster-catcher, from the variety and abundance of food which the shores everywhere present, seems to be guided in its movements by accident or caprice; for those which remain during winter are uniformly observed to be fat and in good plight.

The circumstance in the history of these voyages, however, which appears the most wonderful, is, the accuracy with which some birds return after an absence of several months, to the spot which had the former year been the scene of their domestic enjoyment. This has been particularly observed to be the case with the red-throated diver, stock-duck, kittiwake, and some others; and it demonstrates, in spite of every thing to the contrary, the influence of a vivid recollection, or traditionary knowledge.

Amphibia.

In Zetland both the seal and otter are purely amphibious in their habits. The former, indeed, more nearly approaches to the character of a

fish, as he is never seen nearer the shore than below the high water mark of the tide. The otter is seen occasionally on the dry land, but his retreat is among the rocks; and both feed exclusively on fish, which they derive from the sea.

PHOCA VITULINA, (*Lin. syst.*) *Selkie*, Seal, Common Seal.—Seals are seen in considerable numbers near all the flat shores of the coast of Zetland, and are vulgarly known by the name of *tang-fish*. They vary in size, from two and a half to five and six feet. The common seal seldom exceeds six feet in length. The chief mode of killing them is by the gun. They are sometimes also taken by setting a net, a little before full flood tide, around those rocks which are known to be their most favourite haunts, taking care that the upper edge of the net be sunk to such a depth below the surface of the water, as shall admit of the seals swimming easily over it without exciting their suspicion. The seals almost universally lay themselves on rocks when the wind is off shore, soon after the water begins to fall. When they have been observed to have done so, and time being al-

lowed for the tide to have fallen sufficiently to bring the edge of the net to the surface, a sudden alarm is given, and the seals, in their hurry to escape, and regardless of every other consideration, become entangled in the net and are taken. The nets are generally set at night.

The seals are very much attached to their young, which they bring forth on flat exposed rocks. The young ones are easily domesticated, and display a great deal of sagacity. One in particular became so tame, that it lay along the fire among the dogs, bathed in the sea, and returned to the house, but having found the way to the byres, used to steal there unobserved and suck the cows. On this account it was discharged, and sent to its native element. The flesh of the seal was once very generally ate in Zetland as well as in other places. Sir Robert Sibbald says, that the people of Burrafirth in the island of Unst attack the seals and kill them, "the skin they sell, but the bulks they salt, and in time of lent they eat them as sweetly as venison."*

* Description of the Isles of Zetland, p. 38.

PHOCA BARBATA, (*Lin. syst.*) *Haaf Fish*, Great Seal.—This animal differs from the common seal in size, form, and habits. He is vastly larger, growing to the length of from seven to nine and ten feet. Mr Pennant says, that the length is more than twelve feet.* I am disposed to think that this is a mistake. They are about six feet measured across the chest. The male is the largest, and he is called *bull-fish*. The head is much longer in proportion to the body than in the common seal, and is shaped somewhat like that of a horse, the eyes are placed deep in the orbits, but are large and penetrating.

In the general habits this seal differs much from the common one. They associate in pairs, and the male appears to be exclusively attached to a single female. They frequent the more exposed situations, and shelter themselves in deep and almost inaccessible caverns. The young are brought forth in the months of September, October, and November, and when but a few days old, are as large as the common seals

* Arctic Zoology, vol. i. p. 159.

at the age of several months. They keep by themselves, and never seem to associate with the other species.

These large seals are sometimes taken by setting a net across the entrance to the cave, or helyer, into which they retire, and then firing a piece to alarm them. It is surprising to see with what force they struggle under water, when entangled in the net, and the length of time they can remain without respiring. I once witnessed the capture of one in this manner. It struggled more than twenty-five minutes, without ever performing a single respiration, and when lifted to the surface was still alive. On dissection, the blood in the lungs was of a colour almost approaching to black.

MUSTELA LUTRA, (*Lin. syst.*) Otter.—Mr Pennant describes three species of the otter, the common, the lesser, and the sea-otter.* Two only are generally acknowledged, the common otter, and *mustela lutris* or sea-otter. The Zetland otter partakes of the character and habits

* Arctic Zoology, vol. i. p. 86, and 88.

of the two latter species. The female often brings forth only one at a time. This species is not monogamous. It forms its place of residence generally among the rocks, although sometimes in small islets in lakes, but seldom or never is observed to fish in fresh water. In short, it appears to be the common otter, modified in its habits by situation, and the line of life which its pursuers compel it to lead.

Fishes.

The inhabitants of the sea, in the neighbourhood of Zetland, are infinitely more numerous and diversified than those which exist on the land; but the more perfect kinds usually met with have been repeatedly described. Pontoppidan has detailed most of those which exist on the coast of Norway; and Lucas Debes has given a similar relation of those usually seen within the boundaries of the Feroe islands. Zetland holds a middle situation between them, and, no doubt, partakes of the animals common to both. Scarcely a summer passes over, that the boats at the haaf do not bring on shore some marine animal, which attracts general

attention from the novelty of its appearance ; but as there are few either to distinguish or describe them, they are passed by and soon forgotten. As on the coast of Norway, so on that of Zetland, the bottom of the sea, at a considerable distance from the land, is rugged and precipitous, differing sometimes in the course of a mile, by six or seven hundred feet ; and in the caverns and recesses of these submarine mountains, numberless animals reside, of whose existence we can form no conception. Corallines have, on some occasions, been taken up by the lines, which surpassed in beauty and regularity any similar appearances which I have had an opportunity of examining, either in the British or foreign museums, and no doubt many more perfect examples grow on the rocks which produce them.

Conformably to the arrangement, I shall begin with the whales, and, with a few exceptions, describe the fishes as they occur in the Linnæan system ; but I do not present the list as being a complete one.

BALÆNA MYSTICETUS, (*Lin. syst.*) Great Greenland Whale.—This whale is seen but seldom ; but it has been sometimes found dead.

BALÆNA BOOPS, (*Lin. syst.*) Pike-headed Whale.—This species is more rare than the former.

BALÆNA MUSCULUS, (*Lin. syst.*) Round-lipped Whale, appears sometimes in summer.

PHYSETER CATODON, (*Lin. syst.*) Round-headed Cachalot.—This animal has sometimes been found dead, and driven on the shores by the wind and tide.

PHYSETER MICRUPS, (*Lin. syst.*) Great-headed Cachalot.—As this animal is a native of the northern seas, and has been run on shore and taken, both in Orkney and Feroe, I conclude that it occurs also in the neighbourhood of Zetland.

PHYSETER TURSIO, (*Lin. syst.*) High-finned Cachalot.—This variety of whale has been seen in the bays.

About twenty years ago a whale of the genus *physeter*, and which, from the description I received of it, I should take to be the high-finned cachalot, came into Vaila Sound, in the parish of Walls, and having got into shallow water, near a small island, soon attracted very general attention. Several boats went off provided with anchors and cables, spits and swords. The whale had not taken the ground, and was lying perfectly still; a noose of the cable was carefully put round its tail, and the different crews having landed, by their united strength, suddenly exerted, they drew the animal on shore and killed it. It was above sixty feet long, and yielded a very considerable quantity of spermaceti. A similar animal came on shore alive a few years before in the island of Unst. Lucas Debes, in his description of Feroe, mentions a mode of catching whales of the spermaceti kind, similar to that practised in Walls, where the fishers make a hole through some part of the animal, introduce a rope into it, and then drag it on shore.

DELPHINUS PHOCÆNA, (*Lin. syst.*) *Nissac*,
(Nise of Pontoppidan), Pellach, Porpus.—Por-

pusés, or porpoises, are very common in Zetland. They measure from four to six feet. They have been repeatedly shot by a fowling piece, but are never caught by means of a bait.

DELPHINUS ORCA, (*Lin. syst.*) *Chaffer-whale*, *Grampus*.—This animal is met with at all seasons, is said to be mischievous, and frequently to endanger boats. When this whale follows a boat and alarms the crew, the fishermen have a practice of throwing a coin of any kind towards it, and they allege that the whale disappears in search of the coin, and ceases to molest them. This appears to be a very whimsical opinion, but many of them assert it as a truth.

BALÆNA ROSTRATA, (*Pontoppidan*), *Ca'ing Whale*, *Common Black Whale*.—Pontoppidan conceiving this to be a distinct species of whale, both from its migratory habits, small size, and the beaked appearance of its nose, gave it the name of *balæna rostrata*.* As it is much allied to the genus *delphinus*, Dr Traill

* *Natural History of Norway*, part ii. p. 123.

has given it the name of *delphinus melas*. Vast multitudes of these whales have appeared regularly, for several years, on the coast of Zetland. Summer and autumn, although not the only, are the periods of the year at which they most commonly appear, and they generally go into the deep bays. Sometimes they run on shore of their own accord, but they are generally driven there by boats. As soon as they appear, all the boats put off, and endeavour to drive them on a flat beach. Provided the chase be conducted with prudence and caution, this is often effected; but as there is seldom any concert among the adventurers, and each individual thinks only of his own interest, the whales are often imprudently and unnecessarily alarmed, and fly off to the ocean, or visit some other country. It appears that it is the young of this whale which approaches the shallow water in search of food, and the affection of the parents for them is so great, that they will rather suffer death than be separated from them.

MONODON MONOCEROS, (*Lin. syst.*) Unicornu
Marinum, (Pontoppidan) Narvhal or Narwhal,

the Unicorn-fish.—This animal is frequently taken in the Greenland seas. Muller calls it *unicornu boreale*. The horn is said to be sometimes ten feet long.

A narwhal, or sea-unicorn, run on shore in Weesdale-voe in Zetland, in September 1808. My friend, the Rev. Mr Fleming of Bressa, saw and examined it while yet warm, and transmitted an accurate account of its peculiarities to the Wernerian Society of Edinburgh. It measured, from the nose to the extremity of the tail, twelve feet three inches. The horn was twenty-seven inches long, spirally twisted. The upper part of the body was of a dusky colour, but the belly pure white.*

SYNGNATHUS ACUS, (*Lin. syst.*) the longer Pipe-fish, and *Syngnathus Ophidion*, the little Pipe-fish, have both been met with in Zetland, and are frequently driven on shore during bad weather.

SQUALUS MAXIMUS, (*Lin. syst.*) *Brigdé*, Basking Shark.—This animal is common in

* Scots Magazine for October 1808, p. 727.

the north sea. I have seen it repeatedly lying on the surface of the water in the Mediterranean, and I have witnessed frequently, in Yell Sound in Zetland, a similar appearance. The fishermen have a tradition, that this shark claps its belly to the bottom of a boat, and seizing it with its fins, drags it under water. They are very much alarmed when they see it, although I do not believe that there is any authentic instance of it ever having injured them.

Dr Barry mentions, that the *squalus carcharias*, or white shark, has been driven on shore in Orkney, and makes great havoc among the nets. But as he merely states this generally, and as the animal is more an inhabitant of hot than of cold climates, I am disposed to believe that there has been some mistake in the discrimination, at least I never heard of an animal in Zetland that answered to the description.

SQUALUS GLAUCUS, (*Lin. syst.*) *Hobrin*, Blue Shark.—This I conceive to be the shark most commonly met with on the coast of Zetland. It is a very bold animal, and comes pretty far

into the bays in summer. It seldom exceeds seven or eight feet in length. When fishing haddocks in about twenty fathoms water, this animal is frequently seen to remain within six or eight feet of the bottom of the boat, and regularly to bite off the fish when within a short distance of the gunwale.

SQUALUS ACANTHIAS, (*Lin. syst.*) *Hoe*, (Hae of Pontoppidan), Piked Dog-fish;—very common in Zetland in the months of August and September.

SQUALUS MUSTELUS, (*Lin. syst.*) *Hoe-tusk*, Smooth Hound.—Frequently met with in the bays, and often taken in nets. It is very tenacious of life.

The greater dog-fish, *squalus canicula*, and the lesser dog-fish, *squalus cutulus*, are said to have been met with sometimes in Zetland; but I believe the occurrence is very rare.

CYCLOPTERUS LUMPUS, (*Lin. syst.*) *Padle*, Lump-fish.—This fish is sometimes taken, but

seldom eaten. It deposits its spawn in considerable lumps near the shore.

LOPHIUS PISCATORIUS, (*Lin. syst.*) *Great Plucker*, Sea Devil, Fishing Frog.—This fish is frequently taken at the haaf. It is also sometimes driven on shore during bad weather.

ACIPENSER STURIO, (*Lin. syst.*) Sturgeon.—Tradition says that this fish has been seen in Zetland, but I question much the accuracy of the assertion.

CHIMÆRA MONSTROSA, (*Lin. syst.*) The Sea Monster.*—This is a very bold fish, and somewhat resembles the shark in its habits. It has been known to dart after fish when the fishermen were hauling them into the boat. The general length is between three and four feet, and the colours are highly splendid. Dr

* Professor Jameson informed me, that the late Dr Walker received from Zetland a species of this genus, not described by any naturalist, and to which he gave the name of *chimæra simia*. It is expected that a drawing and description of this animal will appear in the collection of the Doctor's works now preparing for publication.

Shaw well remarks, that its appearance is more grotesque than formidable, nor is it so terrible an animal as from the name we might be led to suppose. It is but seldom taken, and I am not acquainted with its vulgar name.

RAIA BATA (*Lin. syst.*) *Skate*.—This large species is generally caught in deep water, and in considerable numbers in the summer season: when salted and dried in the sun, they keep quite well for more than a twelvemonth, and are much esteemed in Zetland by people of all descriptions.

RAIA OXYRINCHUS, (*Lin. syst.*) *Skate*, Sharp-nosed Ray.—Is also very common.

RAIA CLAVATA, (*Lin. syst.*) *Skate*, Thorn-back.—All the animals of this genus met with in Zetland, receive the general appellation of Skate, but this latter is the most delicate. It is seldom salted, but is either eaten fresh, or in a dried state.

MURÆNA ANGUILLA, (*Lin. syst.*) *Common Eel*.—Of eels there are a great number in Zet-

land, both in the sea and in fresh water lakes. Pontoppidan says, that a friend of his informed him that he had seen an eel two fathoms long, and, when cut up, a yard broad. The people took it to be a serpent, and would not eat it.

MURENA CONGER, (*Lin. syst.*) Conger Eel.—Conger eels are very abundant on the coast of Zetland, and appear to be a very frequent prey of the otter, as they are often found on the rocks recently left, and are sometimes taken from him, and provided the birds have not farther disfigured them, are eaten by the people. It is said that the otter seizes the conger by the tail, and that the latter immediately biting him, is in that manner carried on shore.

ANARHICHAS LUPUS, (*Lin. syst.*) *Stane-biter*, (Steenbider of Pontoppidan,) Sea Wolf, Catfish.—This fish has been repeatedly taken both by lines and in nets. It has a strong odour, but is not unpleasant to the taste.

AMMODYTES TOBIANUS, (*Lin. syst.*) *Giddack*, Sand-Eel.—Sand-eels are taken in great numbers on some sands, by drawing a reaping hook,

sunk to near the hilt, cautiously and steadily through the sand, and when one is felt, turning it suddenly up. They are used chiefly as bait.

GADUS ÆGLEFINUS, (*Lin. syst.*) Haddock.—The haddocks, although they are always resident in a few places, are observed to migrate in great shoals, and visit some parts of the coast after an absence of several years.

GADUS MORHUA, (*Lin. syst.*) The Cod.—Of cod there is a great number on the coast of Zetland, but they present nothing peculiar.

GADUS MERLANGUS, (*Lin. syst.*) Whiting.—The whittings grow to a considerable size. I have seen some a foot and a half long.

GADUS CARBONARIUS, (*Lin. syst.*) Sillock, Coal-fish, Sethe.—I have already mentioned the peculiarities of this fish.

GADUS MOLVA, (*Lin. syst.*) Ling, (Lange of Pontoppidan).—I have stated elsewhere a few of the habits of this fish. The ling deposit their spawn in deep water, and on an irregular rocky

bottom, though at no very great distance from the land. This fact has been ascertained, by the fishermen generally falling in with the ling, when they are spawning, on a bottom of the kind described.

GADUS BROSME, (*Lin. syst.*) *Brismac*, Tusk.— This fish has been generally called the torsk-fish, but it appears to have received that name, from a belief that the appellation approached nearest to the Norwegian. But Pontoppidan calls cod the torsk, and the tusk, brosmen.

The tusk is shaped somewhat like the ling, but much shorter, and thicker in proportion to its length. The extreme length seldom exceeds two feet, and the head is small compared with the size of the body. In a full grown tusk the dorsal fin commences about six inches from the tip of the nose, and terminates near the tail. There is a single cirrhous in the chin; the upper part of the body is of a dusky brown, inclining to yellow, but the belly is white.

The tusk very much resembles the ling in its habits. It is not so gregarious, nor so abun-

dant; and there is a much greater number on the east, than on the west side of the country. Tusk have been occasionally met with in the Edinburgh market.

GADUS MUSTELA, (Lin. syst.) Redware, Fishack, Five-bearded Cod.—This fish is found under all the easily moved stones, below the high water mark.

BLENNIUS VIVIPARUS, (Lin. syst.) Green bone.—This fish, when young, is found under stones. It grows to a considerable size, and then ventures farther abroad.

BLENNIUS GUNNELLUS, (Lin. syst.) Spotted Blenny. The spotted blenny is met with in similar situations with the former.

GOBIOUS NIGER, (Lin. syst.) Black Fishack, Black Goby.—This appears to be the berggylte of Pontoppidan. It is of a reddish colour, thick and short, and is found adhering to the rocks. It is called *berguylt* in Zetland.

COTTUS SCORPIUS, (*Lin. syst.*) *Plucker*, Father-lasher.—This fish, when young, is delicate. It is very voracious, and takes any bait very readily.

ZEUS OPAH or **LUNA**, (*Lin. syst.*) The Opah or King's-fish.—This beautiful fish has been seen occasionally in Zetland. About twenty years ago, an opah-fish was taken at the island of Bressa. It had come in upon the sand, and the splendour of its tints attracted the attention of some fishermen, who went off and succeeded in capturing it.

PLEURONECTES HIPPOGLOSSUS, (*Lin. syst.*) *Turbot*, Halibut or Holibut.—The halibut grows to an immense size; and they are caught in great numbers towards the end of summer, at the north end of the island of Unst.

PLEURONECTES PLATESSA, (*Lin. syst.*) *Fluke*, Plaise, Flounder.—This variegated flounder is met with in almost every bay.

PLEURONECTES FLESUS, (*Lin. syst.*) Common Flounder.—This fish is also very abundant.

PLEURONECTES LIMANDA, (*Lin. syst.*) Dab.
—The dab occurs only in a few places.

PLEURONECTES SOLEA, (*Lin. syst.*) Sole.—
The sole is very rarely taken by a bait. It is
sometimes driven on shore by bad weather,
and occasionally taken in nets. The *pleuro-*
nectes maximus, or real turbot, is seldom or
never met with on the coast of Zetland.

GASTEROSTEUS ACULEATUS, (*Lin. syst.*) *Prig-*
ga Trout, Bansticle.—This slender fish inha-
bits lakes and rivulets.

GASTEROSTEUS PUNGITIUS, (*Lin. syst.*) Les-
ser Stickleback.—This variety is seldom seen
but in summer.

GASTEROSTEUS SPINNACHIA, (*Lin. syst.*) Fif-
teen Spine Stickleback.

SCOMBER SCOMBER, (*Lin. syst.*) Mackerel.
—Mackerel visit Zetland in the month of Au-
gust; but they do not remain long on the
coast.

TRIGLA CUCULUS, (*Lin. syst.*) *Crowner, Crunter, Gurnet, Red Gurnard*—presents nothing extraordinary.

TRIGLA GURNARDUS, (*Lin. syst.*) *Grey Gurnard*.

SALMO SALAR, (*Lin. syst.*) *Salmon, (Lax of Pontoppidan)*.—There are different bays or voes which have the word *lax* prefixed to them, and I have already alluded to the probability, that they received this name in consequence of having been frequented by salmon. But although the word *lax* be expressive of a salmon, it is also used as a general appellation by Pontoppidan, for the whole fish of this genus, and may therefore apply as well to the sea-trout as to the real salmon. From the information of those, however, whom I conceive to be competent judges, I am led to believe, that salmon of a large size have been actually taken in nets in Laxfirth-voe, in the parish of Tingwall. There are no rivers in Zetland, but there are many deep bays, some of which communicate by streams, with lakes of a considerable size. At Burrafirth in the island of Unst, the largest

lake in the country communicates with the sea by a stream, which the rain and the tide often swell to a great height; and here immense numbers of what are called very large trout appear, and are taken every year in autumn. Similar occurrences take place in Deltung.

It is therefore extremely probable, that salmon exist on the coast of Zetland, although it has been observed that they do not frequent streams or rivers which are strongly impregnated with moss water. This must no doubt occur in several of the Zetland voes, but it does not operate, in a great degree, in them all. As salmon seldom migrate farther than from rivers to the neighbouring sea, it is probable that if they were translated to any particular district, they would remain and propagate in it. The late Dr Walker entertained this opinion, and availed himself of the discovery of Mr Jacobi, to point out how it might be effected. This latter gentleman published, in the Berlin Memoirs for 1764, a paper on the artificial fecundation of fishes, which appears to deserve attention. "He found that in salmon

and trouts the roe is not fecundated till after ejection. That when both are extracted from dead fishes, the roe, by mixture, can be fecundated by the milt, and, when placed under water in a proper situation, can be brought forth into life. He further discovered, that this artificial fecundation can be accomplished with the roe and milt of fishes which have been dead two, and even three days." Dr Walker thinks that the fecundated spawn might be easily transported to a considerable distance; and thus valuable and useful fish be translated from one country to another.*

SALMO TRUTTA, (*Lin. syst.*) Salmon-trout, Sea-trout.—Of sea-trout there is a great number in Zetland, some of them are very large, and very delicate.

SALMO FARIO, (*Lin. syst.*) Common Trout.—This fish is common in most of the lochs and streamlets in every part of the country, but is not so much esteemed as the former.

* Natural History of the Salmon. *Transactions of the Highland Society*, vol. ii. pp. 339, 340.

CLUPEA HARENGUS, (*Lin. syst.*) Herring.
—I have already stated every circumstance respecting the history and habits of the herring which have fallen under my observation.

CLUPEA SPRATTUS, (*Lin. syst.*) Sprat, Little Herring.—This fish, although an inhabitant of the northern seas, is seldom seen in Zetland, and its habits are but imperfectly known.

Insecta et Vermes.

The *land insects* of Zetland are so few in number, and of those kinds most universally diffused and best known, that even an enumeration of them is unnecessary. Indeed, the climate prescribes irresistible boundaries to the extensive propagation of beings so frail in their texture, and of so short an existence.

The sea is more abundantly supplied, and myriads of unknown species reside on its shores, and in its rocky caverns. But while some of them, as being objects of utility to man, are deserving of attention, the whole race, considered as animated beings, is unworthy of the la-

bour and time which have been so lavishly spent on them. They exhibit life in so low a state, are in general so imperfect in their faculties and functions, that although the investigation may gratify those who are fond of acquiring a knowledge of arbitrary names, derived often from the most fanciful and incongruous resemblances, it does not enlarge our views of existence, and seldom adds to our knowledge of the principles of organic life. I shall therefore confine myself chiefly to an enumeration of the more remarkable.

The following are in the class of insects.

CANCER PAGURUS, (*Lin. syst.*) *Partin*, Common Crab.—This crab, although it is met with in different parts of Zetland, is seldom eaten.

CANCER BERNHARDUS, (*Lin. syst.*) *Hermit* Crab.—This animal is very abundant.

CANCER HORRIDUS, (*Lin. syst.*)—Generally met with in deep water.

CANCER MÆNUS, (*Lin. syst.*) *Crab*.—This is the most abundant species of crab in Zetland. Vast numbers are devoured by the birds.

CANCER GAMMARUS, (*Lin. syst.*) *Lobster*.—I have elsewhere stated, that there are a great number of excellent lobsters in Zetland, but they are seldom eaten by any class of people. Besides these there is the *cancer phalangium*, and the *cancer araneus*, and perhaps several others.

The animals which follow, are all included in the class *vermes*; for many of them I have been indebted to the previous researches and communications of my friend Professor Jameson.*

MOLLUSCA.

Aphrodita.

A. Scabra,

* A. Punctata, †

* Philosophical Magazine, vol. xvi.

† Those marked with an asterisk, have not been previously met with on the coast of Zetland.

- * A. Imbricata,
- A. Aculeata.

Nereis.

- N. Mollis,
- * N. Lamaligera.

Ascidia.

- A. Rustica,
- * A. Prunum,
- A. Conchilega.

Actinia.

- A. Rufa,
- A. Crassicornis,
- A. Plumosa,
- * A. Equina.

Sepia.

S. Officinalis, *Skeetack*, Cuttlefish.—This animal has been frequently driven on shore at Lerwick during bad weather. It often appears among the sillocks, and alarms them very much.

Sepia Loligo, Sleeve-fish.

Medusa.

- M. *Æquorea*,
 M. *Aurita*,
 M. *Capellata*.

Asterias, Star-fish, Cross-fish.

- A. *Papposa*,
 A. *Rubens*,
 A. *Glacialis*,
 * A. *Reticulata*,
 A. *Ophiura*,
 * A. *Aculeata*,
 * A. *Endica*,
 A. *Caput Medusæ*, Argus
 of the Zetland islands.

Echinus.

- E. *Esculentus*,
 E. *Cidaris*, found in deep water, *Piper*.
 * E. *Placenta*.

TESTACEA.

Chiton.

- * *Chiton Ruber*,
Marginatus,

- * Levis,
- * Fascicularis.

Lepas.

L. Anatifera, Bernacle Triton.

Balanus.

- * B. Communis,
- * B. Balanoides,
- * B. Diadema,
- * B. Striatus,
- B. Balanus, *Roother.*

Mya.

M. Truncata, *Smircelin.*—This shell-fish is found in considerable numbers on sandy beaches, at low water. It is very delicious, and is generally esteemed.

Solen.

S. Siliqua, *Spout*, Razor-fish,—met with in situations similar to the former.

Tellina.

T. Rhomboides, *Cuylliac.*—The habits and localities of this animal are nearly the same with

the former two. It is more abundant, and equally delicate.

Cardium.

C. Edule, Cockle, seldom eaten, except in times of scarcity.

C. Pectinatum.

Ostrea.

O. Edulis, not very abundant but extremely delicious.

O. Maxima.

Mytilus.

M. Edulis, Common Muscle,

M. Modiolus, *Yoag*, Great Muscle.—The large muscles are numerous in different parts of the country. In Bressa Sound, they are found adhering to tangles, in three and four fathoms water, and are taken up by an instrument made for the purpose. In the voe of Bixter, in the parish of Sansting, they adhere to the bottom like stones in a pavement, having their acute ends turned up. They are taken with more difficulty, when arranged in

this latter manner. They are used chiefly as bait.

Pinna.

* *P. Ingens.*

Buccinum.

B. Undatum, White Wilk, very common.

Murex.

M. Despectus, *Buckie*, Large Wilk.

Turbo.

**T. Littoreus*, Periwinkle, Black Wilk, very abundant, and often eaten in times of scarcity.

Patella.

P. Vulgata, Limpet,

* *P. Pellucida.*

Dentalium.

D. Entalis, Tooth Shell.

ZOOPHYTA.

Tubipora.

- * T. Catenularia,
- * T. Serpens,
- * T. Fascicularis.

Madrepora.

M. Organum.†

Millepora.

M. Polymorpha,

† Upon examination of this specimen found in Zetland, and in the cabinet of the late Dr Walker, it is doubtful whether it is to be viewed as a native species, or a fossil species from the limestone rocks of the country.

In conversation with Professor Jameson, he informed me that the apophyses of the lumbar vertebræ of the whale, when separated and tossed about for some time in the ocean, acquire much the appearance of the productions referred to this genus; indeed the resemblance is so strong, that well informed naturalists have been deceived, and have described them as Madreporæ. This gentleman was the first who paid attention to the marine insects in the class *Vermes*, met with on the coast of Zetland; and, with the exception of a few, those marked with an asterisk have been derived from him.

- * *M. Truncata*,
- * *M. Cellulosa*,
- * *M. Pumicosa*,
- * *M. Compressa*.

Gorgonia.

- * *G. Viminalis*, †
G. Nobilis, True Red Coral; of this I have
seen some beautiful specimens.

Isis.

- * *I. Hippuris*, rare.

Alcyonium.

- * *A. Gelatinosum*,
- * *A. Cydonium*,
- * *A. Lyncurium*.

Spongia.

- * *S. Tomentosa*,
- * *S. Palmata*, *Mermaid's Glove*,
- * *S. Oculata*,
- * *S. Ventilabrum*,

† A specimen of this species, found in Zetland, is in the cabinet of the late Dr Walker.

- * *S. Infundibuliformis*,
- * *S. Compressa*, Fabricius.

Flustra.

- * *F. Foliacea*, Sea Fan,
- * *F. Truncata*,
- * *F. Pilosa*,
- * *F. Membranacea*,
- * *F. Lineata*.

Several beautiful specimens of flustra are sometimes taken up from the bottom, by the hooks of fishing lines.

Tubularia.

- * *T. Indivisa*,
- * *T. Ramosa*.

Corallina.

- * *C. Officinalis*.

Sertularia.

- * *S. Abietina*,
- * *S. Halecina*,
- * *S. Antennina*,
- * *S. Volubilis*,

- * S. Genuiculata,
- * S. Dichotoma,
- * S. Spinosa,
- * S. Loriculata,
- * S. Ciliata.

With these submarine bodies the coast of Zetland abounds.

Coryna.

C. Squammata, or Hydra Squammata, of Muller.—This is the only species of polypus that is generally met with.

Although Zetland furnishes but little variety, in the higher departments of Zoology, it affords facilities of obtaining accurate information respecting the individuals which it does possess. To follow the different classes of animals through their domestic habits and arrangements, to trace the operations of instinct, and observe the gradation to reason, are pursuits which interest the mind, and enlarge its views of animal life; and comparative anatomy, by unfolding to us the structure and functions of the different organs, reflects light on the physiology of the human system.

NOTES.

CHAPTER VIII.

Manufactures.

IN chapter eighth of this volume, I have given a sketch of the manufactures of Zetland, and I have suggested the introduction of those, which appeared to me, to be the most useful and practicable.

A woollen cloth manufactory, on a small scale, appears to be of easy introduction, and not to require much capital towards establishing it. Perhaps as useful a way of employing a considerable part of the wool as any, would be to have it dressed and spun in the country, and then exported. This mode would give employment to many hands, and from the facility of sale, would be managed at a small expence.

In 1790, the Highland Society appointed a committee to examine into the state of the Zetland wool,

and the best means of improving the breed of sheep in that country. In 1793, certain small premiums were distributed, and the report of the committee on the quality of the wool was highly favourable. Since that time, however, no regular attempts have been made to improve the breed, or refine the quality of the wool, except by a few gentlemen who possess islands.

I have alluded to the great decrease which has taken place in the quantity of the wool of late years; the following document may enable the reader to form some idea of its amount, at an early period.

“ Observe, that in the year of our Lord 1328, the 25th day of July, did Gialfaldr Ivarson of Hialtland, pay to the Reverend Lord Audfin, the Lord Bishop of Bergen, and Swein Sigurdson, Comptroller of the King's household, the tenths due to the Pope, viz. 22 cwt. of wool, less than 16 pounds, according to the standard of Hialtland, being 36 span Hialtland weight of wool.” *Translated from the Original Danish, in the Bibliotheca Topographica Britannica.* Antiquarian Society.

I have also hinted at the propriety of establishing a manufactory, for the making of fishing lines and

the smaller kinds of cordage. This, I believe, might be beneficial to those concerned in the ling fishery, though perhaps not to the extent generally supposed. The chief advantages that could result from it would be the facility of obtaining lines at any time, and of any size, which experience might prove to be useful. But the non-residence of the proprietors of the manufactory near the market, and the consequent difficulty of availing themselves of every favourable opportunity of the sale of hemp, and the heavy expence attending the importation of light and bulky articles, would constitute serious drawbacks on the profits of the concern. These objections indeed, apply to the establishing of almost any manufactory, the raw materials of which do not already exist in the country, and the want of this latter, is the chief and obvious cause, why manufactures of different kinds have not already been more generally introduced. There is no want either of capital or of enterprize; but there is a rational and well founded disinclination, to engage in adventures which appear to lead to no beneficial result. The plaiting of straw succeeds, because the demand for labour is not great, the material to be manufactured is introduced in a prepared state, and not being bulky, the expence of freight is inconsiderable.

CHAPTER IX.

Commission of Justice of the Peace.

Page 36.—of the text, I have mentioned, that Justices of the Peace had been recently appointed in Zetland. After the abolition of the office of Baillie, there was long no efficient magistrate in the country but the Sheriff. To remedy this inconvenience, a considerable number of years ago, the heritors drew up a petition, stating the necessity of appointing Justices of the Peace, which they put into the hands of the late Mr Walter Scott, Sheriff-substitute, to be forwarded by him through the proper channel. But whether Mr Scott neglected to transmit it, or the letters were lost, the petition never reached the place of its destination, and the heritors concluded that their representation had been ineffectual. Lately, however, when the excise officers found such an auxiliary necessary to aid them in the execution of their duty, warrants were granted on the first application.

Although several of the principal gentlemen in the country were nominated to be Justices of the Peace, only four of the whole accepted, and more than half the country is therefore still without such an esta-

ishment. Considering, however, the circumscribed nature of Zetland, the similarity of interest among the proprietors of land, and the circumstance, that the causes which are most likely to be brought before the Justice Courts, are disputes between landholder and tenant, it is not perhaps most conducive to the public good, that the judges should be men of the greatest influence in the country. Some of the individuals who held the office of Baillie were men of property and power, but the greater part of them were men of independence, but without influence, and they were responsible to the heritable Steward who appointed them, and to the public who watched their conduct. They were intermediate between the people and the heritors, and formed a barrier between the licentiousness of the one, and the encroachments of the other. Some similar establishment would be more generally useful than that of Justices of the Peace, composed as they are at present, of but a few of the principal proprietors of land in the country.

Character of the Zetlanders.

The character of the inhabitants of the Zetland islands, appears at all times to have made a favourable impression on every liberal minded traveller, and

I feel pleasure in repeating such testimonies in their favour.

“ Now will I stand over to the islands of *Orkney* and *Shetland*, which have no needs of other description, but that it is a pity so good and civil people should inhabit no better a country; we may say the contrary of them that we said of the island of *Lewis*, that it was a good land, but evil people; those are a good people, but possess an evil soil!” *Sir William Monson's Naval Tracts, in Churchill's Voyages.*

“ The gentlemen delight in nothing so much as that of entertaining strangers, which even the meanest class take a pleasure in equal to their abilities.—Of the ladies, their air is modest and graceful, their conversation is sweet, plain and agreeable, and their dress genteel, without the least affectation.” *An Account of the fishery carried on yearly in the island of Zetland, by a Gentleman who resided five years on the Island.* London 1750.

Dr Campbell has ably pointed out some of the obstacles which have retarded the improvement of these islands, and suggested the means of ameliorating their

condition. His observations on this subject are very judicious.

“ Another, and that no slight cause, was the many false, fabulous, and impertinent relations published concerning them, as if they were countries unhabitable and uninhabitable; and lastly, the indolence or indifference rather of the natives, who, contenting themselves with those necessaries and conveniences procured by their intercourse with other nations, and conceiving themselves neglected by their mother country, have seldom troubled her with their applications. It is however very certain, that nothing can be of greater importance to Britain, than her having a clear and distinct account of every part of her dominions, a just idea of the advantages that may be derived from them, a precise view of the obstacles through which she has been hitherto deprived of those advantages, and a competent notion of the means by which they may be renewed.” *Political Survey of Great Britain*, vol. i. p. 678, 679.

CHAPTER X.

Parochial Schools.

Page 61—of the text, I have stated the limited sources of instruction, to which, until lately, the

poorer classes of society in Zetland had access, and the advantages likely to result to the country from the more general diffusion of intelligence. The ancestors of the present proprietors of land, were early impressed with a conviction of the truth of this observation, and the following spirited, sensible, and patriotic resolution, does them the highest credit.

“ At Lerwick, the 14th of November 1724, anent proposals for erecting parochial schools in Zetland, in presence of Thomas Gifford of Busta, steward and justiciar depute of Zetland, sitting in judgment, the whole heritors in Zetland present, by themselves or their proxies, of which proposals the tenor follows in these words :—Proposals unto the gentleman heritors of Zetland, anent settling parochial schools there, as law provides. As it is not unknown to any of you, that there is no legal school in any parish of the country, so there is none of you can pretend ignorance of the laws and acts of Parliament made thereanent, whereby it is ordered and strictly observed throughout the whole kingdom of Scotland, that a legal school be erected in each parish thereof, as particularly by act W. par. 1. ses. 6th, cha. 26th, ratifying all former acts anent schools and schoolmasters, by which act the heritors of each parish are obliged to settle a fund for maintaining a school, not under 100 marks Scots money yearly, nor exceeding 200 marks said money, and although that good and necessary

law hath not yet obtained in this country, yet certainly we are no less bound to the observation thereof, than any other place within the said kingdom, nor can the same be supposed less necessary here than any where else; nay it is plainly obvious to any thinking person, that the gross ignorance and immorality that doth every where abound here, is chiefly, if not solely, owing to the want of that early education and instruction of children, not only in the knowledge of letters, but also in the principles of our holy religion, which a school in each parish would in a great measure supply; and to insist upon the usefulness and necessity of such parochial schools were superfluous, seeing it is not presumeable that any good man will either dispute that, or refuse to contribute his utmost reasonable endeavours to propagate a work so pious and beneficial to the country; for in whatever parish a school is once settled, beside the benefit of that school, if the parish is discontiguous so as one school cannot serve the whole parish, they are, upon a right representation thereof, intitled to a school from the Society for Propagating Christian Knowledge, whereas the parish where no legal school is settled has no title thereunto. Now the grand objection against erecting these legal schools in this country is, that the heritage or land-rent, in most parishes here, is so inconsiderable, that the small heritors are not able to support the charge thereof, for obviating of which

difficulty, although it cannot be denied that the charge thereof will be a greater burden upon the small heritors of Zetland, than upon most places in Scotland, yet considering the great benefits that may thereby arise to the poor inhabitants, it can be demonstrated if the heritors are willing and unanimous, there is not a parish in Zetland but can afford one hundred merks yearly, without any great burden upon the heritors, according to this method, that seeing there is no certain valuation of land-rent here, let that fund for the school be laid on in the same manner the cess is upon the marks of land, and the tenants to be the first advancers thereof, and the one half of what they advance to be allowed them out of the land-rent; and thus there are some parishes in Zetland that by an imposition of one shilling Scots upon the mark land, will amount to upwards of 100 pounds Scots; other parts there are that at the rate of one shilling and sixpence said money, will surely amount to 100 marks, so that it can be left to the discretion of the heritors in each parish to proportion it upon the land as they see cause, the quota not being under 100 marks yearly; and this being agreeable to the method proposed in the act of parliament, and common practice throughout the kingdom, it is expected it will take the better in this place, or if any better method can be offered by any person or persons for effecting of this pious and necessary design, let the same be produced to be considered of by all the gentlemen, or any

other needful amendments, and the fund being once settled, the direction thereof to be left to the heritors, minister and kirk-session in each parish, to be improven to the best advantage for promoting the end thereby designed. T. G."

The above proposals were read in open court, deliberately considered, and, with a few trifling limitations, unanimously subscribed by the following gentlemen, and referred to the Earl of Morton for his concurrence:—

Robert Sinclair, Lawrence Bruce, James Mitchell, William Dick, Magnus Henderson, Andrew Scott, George Pitcairn, Robert Cragie, Robert Bruce, William Bruce, Thomas Hendrie, Robert Sinclair, John Laurence Stuart, Hector Scot, James Dunbar.—
(Signed) T. G. Extracted, J. G." *Country Acts appended to Gifford's Historical Description of Zetland.*

Impressing of Men.

Page 67—73.—of the text, I have stated some of the hardships to which the Zetlanders are exposed from the impress service. The following general exceptions by law, do not appear either to be known or acted upon in that country.

“ Every person being of the age of fifty-five years or upwards, or not having attained the full age of eighteen years, is freed and exempted from being impressed into the service of his Majesty.”

“ Every person of what age soever he be, who shall use the sea, shall be exempted from being pressed for the full space of two years, to be computed from the time of his first going to sea.” 13 Geo. III. c. 17. §. 1, 2.—*Hutcheson's Justice of Peace*, vol. iii. Ed. 2d. p. 188.

Men older than fifty-five, and boys who never had attained eighteen years of age, have been impressed in Zetland; and to have been even once at Greenland, is looked upon as a sufficient degree of experience to constitute a seamen.

Rate of Travelling, and Price of Labour.

I have, in different parts of this work, alluded to the progressive rise in the price of many articles of consumption. In no department of general expenditure have greater changes taken place, than in what respects the rates of travelling, and the price of labour. While the country acts were recognized, every ferry had its fixed price, for every occurrence.

there was a specific arrangement, and every thing was conducted on principles of equity and uniformity. But since they have been abolished, accident, caprice, and pretended custom, have been the only standards to which recourse was had in cases of doubt and uncertainty.

The following comparative statement of the expence of travelling in 1770, and 1809, will shew the changes which have taken place on this subject. I have selected the instances from among many others, as from the variety of situation, they convey a general notion of the state of the whole country in this respect. The country acts had been falling into disuse before 1770, but the practices which they enjoined were still observed.

Freight of a Boat with six Men.

	1770.	1809.
From Unst to Fetlar,	L.0 0 10	L.0 2 6
Uyea Sound to Reafirth,	0 2 0	0 6 0
Burra-voe to Lunna,	0 2 2	0 6 0
Burra-voe to Symbister,	0 3 2	0 9 0
Whalsey to Lerwick,	0 3 2	0 12 0
Catfirth to Lerwick,	0 1 8	0 6 0
Lerwick to Dunrossness,	0 4 2	1 0 0
Scallaway to Sand or Rewick,	0 1 6	0 6 0

	1770.	1809.
Scallaway to Vaila,	0 3 4	0 9 0
Papa to Busta,	0 3 0	0 9 0

The fares across the small ferries, were in the same proportion.

“The land fare in Zetland is for horse-hire, one shilling Scots (penny) the mile, and something to the boy.; for a post with a letter, one shilling said money per mile out, or for carrying any light burden the same.” *Country Acts, appended to Gifford's Historical Description of Zetland.*

Instead of one penny for horse-hire, the ordinary fare now is threepence per mile, and often more, besides some allowance to the guide.

The increase in the price of labour, of the different classes of tradesmen and labourers, has been more gradually progressive.

Price of Daily Labour.

	1770.	1809.
A mason,	L. 0 1 0	L. 0 2 3
A house-carpenter,	0 0 10	0 2 3

	1770.	1809.
A ship-carpenter,	0 1 0	0 2 6
A cooper,	0 0 10	0 2 0
A smith,	0 1 2	0 2 6
A journeyman tailor,	0 0 6	0 1 6
A weaver,	0 0 10	0 1 6
A shoemaker,	0 0 6	0 1 2
Slaters, they are scarce,	0 0 10	0 2 6
A common day labourer,	0 0 6	0 1 0

As many of them are paid by the job, and on some occasions receive board and lodging during the performance of it, I have taken the general average from a calculation formed on that consideration.

Except at Lerwick, and in the country gentlemen's houses, the wages both of male and female servants are still low.

CHAPTER XII.

In Section ii. of the text, I have investigated the causes which affect the state of the population in Zetland. I have stated as my opinion, that it has not increased since 1804, and I have good reason to be satisfied that this view is correct as applied to the ministries of Walls, Sansting, Delting, and Nesting. As these ministries embrace more than a third part

of the whole country, and as the principles which affect population in this country, are general in their operation, it may be received as a fact, that the number of inhabitants has not increased since 1804, and that the population is beginning to be retrograde.

The view which I have given of the population in Zetland, derives illustration from the history of the population in Orkney. Between 1755 and 1793, Zetland gained an increase of 4976 inhabitants, while Orkney, during the same period, acquired an accession of about 100. Between 1793 and 1802 Zetland acquired an additional augmentation of 2173, and Orkney of 1400; and the actual difference between them at present scarcely amounts to 2000 souls.

Such a difference appears the more surprising, when we take into consideration the facts, that in Orkney there is a much greater quantity of land in actual tillage, and consequently a greater quantity of provision is produced annually; that the commerce of Orkney is more extensive, and the manufactures more general and productive; nor is there a greater emigration than from Zetland. The manufacture of kelp alone, employs above three thousand individuals, each of whom, on an average, can earn, during two months, from 2l. 10s. to 3l. The lobster fishing occupies a number of men, each of whom during summer

can earn 10l., and the linen manufactory is carried to a very considerable extent. *Barry's History of Orkney*, pp. 378, 387.

In Orkney, however, the farms are larger than they are in Zetland; and there is no anxiety on the part of the proprietors of land to encourage early marriages among the tenants. It requires both experience and capital to enable a man to take on himself the responsibility of a large farm; and the difficulty of obtaining the requisites to engage in such an adventure, operate as powerful checks on matrimony. To the operation of the principle of moral restraint, may be referred the difference in the state of the population of these similar and sister countries.

THE END.

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