

THE ORIGIN AND EARLY HISTORY
OF THE
AYRSHIRE BREED OF CATTLE.

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INTRODUCTION.

For a long time I have been in the habit of collecting any short notes which I happened to come across regarding the early history of the Ayrshire. The first intention was simply to have them for reference, but as they increased in number and volume, the idea occurred to me that at some future date they might be of sufficient interest to Ayrshire breeders to warrant their publication in book form.

After the formation of the Ayrshire Cattle Milk Records Committee, and the decision to publish the results of their work annually, it was thought that the notes would form a suitable introduction to the first volume. While the proofs given of the descent of the Ayrshire from the Dutch breed of cattle are not so complete as it may yet be possible to make them, it is hoped that so far as they go the public will accept of them for what they think they are worth, and where they have anything of interest or importance to add that they will communicate it to the writer. If such is done it may be possible to have it added at some future date.

JOHN SPEIR.

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EARLY HISTORY OF THE AYRSHIRE BREED OF CATTLE.

Britain is the breeding ground for the rest of the world of a large number of the varieties of pure bred cattle. Among pure dairy breeds, the Ayrshire is probably one of the most valuable, and is certainly one of the most distinctive and wide spread. Although generally considered to be one of the most recent breeds, its origin is probably shrouded in as great mystery as any of the older ones. Being comparatively speaking of recent origin, one would have naturally expected that full particulars would have been available regarding its origin and subsequent growth. Strange to say, quite the reverse is the case, and although the breed differs in almost every detail from the other breeds in the country, so little notice was taken of it by the early writers that only the merest scraps of information are available regarding its early history.

The early writers who have referred to the breed have generally spoken of it as having been introduced from Holland, but even in this they are not unanimous, and one writer (Aiton) seems to have considered it an improved selection of the then existing breed. Although the interval since its introduction is not great, even tradition has handed down very few details. This is all the more surprising, as the county of its origin is rich in folklore, and the people of the district took a most active part in all the great upheavals to which the country was subjected from the invasion of the Romans to the battle of Largs, the struggles for freedom of Wallace and Bruce, and through the Covenanting period. The popular tradition is, however, that the breed was an imported one, and the probability is that if so it has in part been modified as time went on, through selection, and very likely also to some extent through occasional crossing with other home or foreign breeds, and probably also to some trifling extent by change of food and climate. The admixture with other breeds seems to have been very trifling, if one is to be guided by what the early writers say, or from the extremely rare intervals at which calves are produced which do not conform in all particulars to the general type of the breed.

The early writers had little opportunity of becoming acquainted with what each other wrote, and with the bulk of these available it is possible at the present time to probably review the conditions then prevailing more accurately than could be done by some of those writing a century or more ago. In the following pages quotations

are given from the majority of the early writers who have referred to the cattle of Britain, and as far as possible these are allowed to tell their own tale. In this way it is hoped not only to give a more interesting history of the breed, but also a more complete one than has hitherto been attempted.

THE ORIGINAL CATTLE OF SCOTLAND.

It is generally acknowledged that in all countries and at all times, on invasion or particularly after defeat, the inhabitants retired with their women, children, and cattle, to the more inaccessible regions. In this way the original people and cattle of Britain are presumed to have been driven into Wales and the more outlying parts of Scotland, and those of Ireland into Kerry and Donegal, and the more remote and secluded parts of these countries are believed to contain specimens directly descended from the cattle of pre-Roman times. Owing to the repeated invasions to which even the most remote parts of our country were subjected, it is very unlikely that any pure specimens now remain of these original cattle, but many of these districts still contain breeds which we have reason to believe closely resemble in many particulars the cattle of Britain in pre-historic times.

On numerous occasions skeletons, skulls, and hair of cattle have been found in remains of lake dwellings, morasses, and in or near old forts all over the British Isles. Along with these remains there have usually been found closely associated with them numerous stone or bronze articles of daily use at that time in the household, the chase, or in war, all of which approximately indicate the period during which the animals lived. Owing to the good state of preservation of many of them, it is possible to reconstruct the animals from the details available, and thus present to view at the present day an approximate idea of not only what was the shape and size of cattle in prehistoric times, but also their colour. Although there were no books in these early days, these remains give us as clear an idea of what the cattle were at that date, as if the most elaborate description of them had been written.

There is abundant and almost indisputable evidence from various sources that during the stone age the cattle common all over, not only Britain but Northern Europe, were a very small breed. A skull is preserved in the Woodwardian Museum with a polished stone axe still sticking in the bone. The skulls of this period which have been recovered in peat mosses, morasses, crannogs or other similar places all closely resemble each other, and from the positions in which they are found the inference is that at that period they were more or less domesticated. Descriptions of these skulls found in Switzerland, France, Sweden, and Britain, all more or less agree, and archæologists have named the breed to which these skulls belong as the *Bos Longifrons*. The skull in the Woodwardian Museum is, however,

of an older breed, which is presumed to have been extinct in Britain at the invasion of the Romans. Looked at from the front the skulls of the *Bos Longifrons* very closely resemble those of the Jersey both in length and breadth, and from the side they have a striking likeness to the Kerry or Arran cow. In a typical specimen of these short-horned Celtic cattle sent me by Prof. Cossar Ewart, which had been taken from the Roman Camp at Newstead, in Berwickshire, the base of the horns is six inches wide, the inner edges of the eye sockets are seven inches apart, while from the top of the crown to a line between the lower edges of the eye socket is eight inches. The horns start at right angles to both sides, then curve gently forward, downward and inward, almost exactly like Jerseys of the present day. The horn cores are well preserved, and from 3 to $3\frac{1}{2}$ inches long, so that the horns of this breed were fully shorter than those of Shorthorns of the present day, or of Jerseys which they so closely resemble in many respects. Prof. Cossar Ewart when writing me regarding this breed says:—"This ox (sometimes called *Bos Longifrons* or *Brachyceros*) was apparently the only one in Britain when the Romans came." Although before this period civilisation had advanced to such a stage that boats were built of a size sufficient to cross from Belgium or France to Britain, and from Wales or Scotland to Ireland, no other breed could have been brought from either of these countries, as at that date they apparently had only the same breed as was in Britain. At the Roman invasion it therefore seems as if there was only one breed of cattle in Britain, and at that date it had not previously been crossed with any other. One of the highest authorities on these matters at the present time is Prof. M'Kenny Hughes, of Cambridge, and he says:—"The Romans found that breed here and no other." The Romans came to Scotland in 80 A.D.

Even in the most remote and inaccessible districts it seems as if the original Celtic short horned breed is nowhere now even approximately pure. In some districts it has been crossed with long-horned breeds, and in others with hornless ones. The small breed of black cattle in Arran seems to have had some long-horned blood infused into them, as their horns not only now, but 50 years ago, were much larger and stronger than those of the *Bos Longifrons*. It is probable, however, that while their horns have increased in length and thickness, their bodies are of much the same weight as they originally were. The black colour still remains in a majority of the animals, but various colours have been introduced by other breeds. Writing me recently on the subject of colour, Prof. Cossar Ewart says:—"At the present day a pure Celtic short horn nowhere exists, but by crossing a mouse-dun Shetland cow with a dun Jersey bull, I have obtained a black cow with short horns, which probably in colour, make, and horns is very like the old marsh cattle of our lake-dwelling ancestors." In cattle breeding colour probably offers one of the

readiest and most reliable means of tracing any animal's ancestors, and for those who understand the principles of the laws of breeding as laid down by Mendel, De Vries, Bateson, Davenport, Wilson, &c., there is much more in this simple experiment of Prof. Cossar Ewart's than is apparent to the ordinary observer.

Half a century ago large numbers of the small black Arran cows were brought to Ayrshire, many of which were sold singly to farmers to be fattened for home use. At that time each farmer killed and salted an animal for winter beef, and as this animal was usually slaughtered about Martinmas it was generally called a mart.

THE INTRODUCTION OF ROMAN CATTLE.

Prior to the date of the invasion of Scotland by the Romans in the year 80 A.D., there was no written history of the country or people. As has already been pointed out, the original cattle of Britain at that date were small in size, black in colour, and had short horns. The Roman draught cattle were creamy white, with black muzzles, ears, and feet, while the tips of the horns and tail were also black. The draught cattle of Italy at the present day are still of that colour, and so are those of Austria-Hungary, over which the Romans held sway, and some of the Welsh cattle are similarly coloured and marked at the present day. Until quite a recent date cattle were principally bred for draught purposes, the production of meat or milk being a secondary consideration. When the Romans came to Britain they brought their draught cattle with them, and as these wonderful colonisers did an immense amount of useful work, the number of draught cattle (either Roman or British) which they employed must have been very great. They not only built forts wherever they went, but at two places immense walls or embankments right across the country, besides various roads from the south of England up to the line of the Forth and Clyde Canal.

While it is probable that the Romans may have introduced into Britain other cattle besides their own, unless these were brought from a very great distance they would effect no alteration on the British breed, as they were of exactly the same kind. The probability, therefore, is that they introduced the long horns which are noticeable in increasing numbers from this date onwards. Neither is it necessary that we should attempt to find some other breed which was able to increase the length of the horns, or introduce a lighter colour of hair or skin, as the Roman breed of cattle were able to convey both, since the Roman ox has horns longer than the West Highlander of the present day.

When at the height of their power the Romans had a complete hold on three-fourths of Britain, and during the few hundred years that they ruled over it, they did much to encourage the cultivation of the soil. Draught cattle would in consequence greatly increase in

demand, and as the Roman ox was very much larger and stronger in the bone than the native British one, it would naturally be very much used for crossing purposes. The black, white, and black and white Welsh cattle are presumed to be crosses between the original black short horned cattle of Britain and the white long horned Roman cattle. In the cross the long horns of the imported cattle have remained dominant over the short horns of the aboriginal breed. While a pure black breed is dominant as far as colour is concerned over red or brown, it is not so with a pure white breed such as the Roman cattle. The Welsh breed seems therefore to be a cross between the two breeds, the cross taking on more or less of the strength of horn of the Roman cattle, and dividing its size and colour between the two ancestors, some remaining black and others white, but the majority black and white.

When the end came the Romans left Britain rather hurriedly, and some of their cattle seem to have been left behind unclaimed or unattended to by anybody. The country at the time, and for many years afterwards, was in a very unsettled condition, as shortly after the Romans left, the Saxons invaded Britain, and as the Celts were driven by them northward and westward, they seemingly left some of the Roman cattle behind them, which later on became quite feral and had to support themselves as best they could in the various forests which at that time covered a large part of the country.

In Low's "Domesticated Animals" there is a translation by Bellenden from the writings of Hector Boece, who wrote about 1526, regarding these same white cattle, in which the following occurs:—

"At this toun began the grit wod of Calidon. This wod of Calidon ran fra Striveling (Stirling) throw Menteith and Stratherne, to Athol and Lochquabir, as Ptoleme writtis in his first table. In this wod wes sum time quhit bullis, with crisp and curland mane, like feirs lionis, and thought they semit meek and tame in the remanent figure of thair bodyis, thay wer mair wild than ony uthir beistis, and had sic hatrent against the societe and cumpany of men, that thay nevir in the wodis, nor lesuris quhair thay fand ony feit or haind thereof, any mony dayis eftir, thay eit nocht of the herbis that wer twichit or handillit by men. Thir bullis wer sa wild that thay wer nevir tane but by slight and crafty laubor, and sa impacient that eftir thair taking, thay deit for importable doloure. Also sone as ony man invadit thir bullis they ruschit with so terrible preis on him, that they dang him to the eird, takand na feir of houndis, scharp lancis, nor uthir maist penitritive wapinnis. . . . And thought thir bullis wer bred in sindry boundis of the Caledon Wod, now be continwal hunting and lust of insolent men, thay are distroyit in all partis of Scotland, and nane of thaim left but allanerlie (an odd one) in Cumarnald."

In connection with this same subject in Bannatyne's Journal, page 521, we find that the Earl of Lennox was accused of destroying "the quhit kye and bullis in the forest of Cumbernauld." Further on it is stated that "that kind of ky and bullis has been keepit thir money zeiris in the same forest, and the lyke was not mantenit in ony other pairts of the ile of Albion."

While the white cattle in Cadzow Forest, Hamilton, on the estate of His Grace the Duke of Hamilton, are the only ones now in Scotland, there were other herds up to quite recent times. Robertson in his "History of Ayrshire" states that Alexander, Earl of Eglinton, had at the Castle of Ardrossan a herd of these cattle, and that in 1820 they were removed from there to Duchal in Renfrewshire. Since then they have either died out or been killed, for there have been none at Duchal for very many years.

In various quarters there is a common belief that the cattle of Cadzow Forest have been descended from a similar breed used by the Druids for sacrificial purposes. This is, however, mere conjecture, and there is almost no evidence warranting such a belief, and from what has already been said it will easily be seen that the preponderance of evidence is that they were introduced by the Romans, were used by them for draught purposes as long as they occupied the country, and after they left the few that remained were allowed to become quite feral.

A very much larger number of Ayrshire cattle are now white or almost white, compared with what there were in the early days of the breed, and we often hear the remark made by breeders that the prevalence of white among Ayrshires of the present bay, is a reversion of the breed to the colour of their ancestors—the white cattle of Cadzow Forest and other similar herds. That, however, is not the case, as there is not one jot of evidence indicating that at any time, or even for a limited number of animals, the Ayrshire breed of cattle had any connection whatever with the ancestors of the Cadzow Forest breed of cattle. The reason seems to be that between 1865 and 1880 several bulls with a large proportion of white in their colour, became noted prize-takers. These were largely bred from, and in a few years their progeny were widely distributed over the south-western counties. These also turned out good bulls, and were largely bred from, so that the prevalence of white among Ayrshires at the present time is easily enough accounted for without any occasion to go further back than our own time. Had the present tendency to white been the result of "atavism" or harking back, as it is called, to the white of the ancestors of the Cadzow cattle, the Ayrshire would have bred quite differently when mated with other pure breeds. For instance, when white Ayrshires are mated with roan or white short horns, the progeny are generally roan, red and white, or red. Had the white in the Ayrshire been derived from the white in the Cadzow cattle, the probability is that a large

proportion of the calves would be white, when so mated. In practice we know that this does not occur, which is very strong evidence that there is no relationship between the Cadzow cattle and the present breed of Ayrshires.

SUPPOSITION OF NORWEGIAN ORIGIN.

It has often been suggested that the Norwegian occupation of Scotland had something to do with the introduction of the Ayrshire, but just what amount of truth there was in that belief has not hitherto been attempted to be elucidated by any one. The Norwegians occupied more or less of Scotland for about 500 years prior to the battle of Largs in 1263. It has been an almost invariable rule with conquering nations that sooner or later they introduced some of their own stock into the conquered country, and there are good reasons for believing that the Norwegians were no exception to that rule. They settled first in Orkney, and from there spread down the east and then down the west coast. About a half of the native cattle of Norway are at the present hornless, and one or two of the breeds have very distinctive markings, both of which are dominant characteristics when these animals are crossed with other breeds. In Norway, as in Scotland, there are few written records of the cattle of the country prior to 1600, and rightly or wrongly the Norwegians believe their hornless breeds to be their oldest. With us a somewhat similar belief exists, viz., that our hornless breeds are among our oldest, and that they were closely associated with the districts occupied by the Picts. Neither tradition is in any way contradictory to the other, but neither adds scarcely anything to the contention that all are from the one origin, yet although there are many indications that this may be the case, there is little which can be called direct proof.

It has already been pointed out that there is ample evidence that the original cattle of Britain were very short horned, and that the Romans introduced long horned cattle. From the Roman camp at Newstead, Berwickshire, twenty skulls of cattle have been recovered, and of these one was that of a hornless breed. Whether that one belonged to another breed which the Romans had brought to Scotland, or was one obtained by the last of the Romans from the first of the Norwegians is never likely to be very authoritatively decided, but the fact remains that before the Romans left Britain hornless cattle were in Scotland.

The Norwegians had a very firm hold on some of the Western Islands, and to some of these they seem to have introduced at least one of their breeds. What is known as the present Telemark breed of cattle is a horned dairy breed, somewhat smaller in size than the Ayrshire, white on the belly and legs, and along the spine. The white markings along the back have a sort of herring bone

appearance, which in Mendelian language seems to have a dominance over other colourings, very much the same as the white face of the Herefords. A generation ago cows with these white strips along the back were common all along the west coast, but now owing to fashion being against this colour, they are less frequently met with. Among Ayrshires an odd one now and again is seen having both the back and belly markings almost as distinct as a pure Norwegian Telemark cow. A portion of the cattle of Northern Germany are also so marked, and as during the Saxon invasion some of these were likely brought to England, it is possible that the stripes along the back may have come from that source as well as from Norway. The Saxon association with the south-west of Scotland was, however, never so close as that of the Norwegian, and the probability therefore is that any such influence now felt, is from the latter source.

In his report on Ayrshire to the Board of Agriculture in 1793, Fullarton thus refers to the ordinary cattle of the country:—"The cattle in this district appear originally to have been of the old Scotch low country kind.* Formerly black or brown, with white or flecked faces, and white streaks along their backs, were prevailing colours." This description is very much as would be expected had there been some admixture of Norse or Saxon blood. It will be noticed that Fullarton says "appear originally," and as these markings strongly indicate a Norse or Saxon origin (parts of Norway and Germany having still breeds of cattle so marked) we are forced to the conclusion that these colourings were originally derived from cattle from these countries. The markings themselves would not be sufficient to warrant such a conclusion, but when coupled with the knowledge that the people of these countries invaded and held for several hundred years various tracts of the country, what would originally be only a supposition becomes almost a proved fact.

While the foregoing remarks of Fullarton's apply only to the original cattle of the country, the presumption that they had a strong infusion of Norwegian or Saxon blood, has little bearing on the appearance of the Ayrshire breed of cattle as we now know it. He even makes this clear further on where he says, "But within these twenty years, brown and white mottled cattle are so generally preferred as to bring a larger price than others of equal size and shape, if differently marked. It appears, however, that the mottled breed is of a different origin from the former flock, and the rapidity with which they have been diffused over a great extent of country is a singular circumstance in the history of breeding." He evidently

* Several of the early writers, when referring to low country cattle of such a class as might be used for dairy, or feeding purposes, give them the name of Cadder cattle. The parish of Cadder is from 10 to 12 miles north of Glasgow, and the district has been closely identified with dairying from a very remote date. Several tributaries of the Clyde are called Calders, and 12 to 15 miles west of Edinburgh, there is another parish of Calder, with the three villages of East, Mid, and West Calder.

believed that the mottled cattle, or new breed, were entirely "different in origin from the former flock," and whatever indications may have been apparent in the old breed of the influence of the previous infusion of Norse blood, it could have nothing to do with the mottled marking of the new breed, which Fullarton says were generally preferred to the old ones.

SUGGESTION OF SPANISH ORIGIN.

A suggestion has occasionally been made that the Ayrshire may have originated from animals saved from a ship of the Spanish Armada which was wrecked at Portincross on the West Kilbride coast in 1588. This theory (for it is nothing else, as there is no direct evidence to support it) probably arose from the fact that the breed first attracted attention in a parish not far removed from the scene of the wreck, and its date is about the period when the first of these animals may have arrived. The story is that this ship foundered on a sandy bottom within a very short distance of the shore, and tradition affirms that part of the crew were saved. This seems highly probable, as it is almost certain that some ship of the kind was wrecked there at that or other date, as in 1740 several brass and iron cannon were recovered from the wreck, one of which has been retained on the beach to the present day.

The supposition is that some of the cattle on board swam ashore, and formed the nucleus of what afterwards became known as the Ayrshire breed. While it is highly probable that some of the cattle were saved which are reported to have been on board at least some of the vessels, there is nothing to connect these cattle with those from which the Ayrshire breed originated. Ayrshire cattle are so distinctive in their colour and markings, that they could only be descended from others having similar characteristics, and at the present day no breed in Spain has any family resemblance to the Ayrshire, unless in the style and shape of horn, which in itself is a trifling matter. The suggestion may therefore be dismissed as being purely a myth, and with even less fact than usual to give it the colour of probability.

THE INTRODUCTION OF DUTCH CATTLE INTO ENGLAND.

In tracing back the history of the Ayrshire, it is necessary to refer to the rise and progress of some of the English breeds. While this part of its history is probably the most important link in the chain of evidence connecting the Ayrshire with its Dutch ancestors, it must be admitted that it is the part which is likely to be most disputed by those who have formed the opinion that it was derived from other sources. It must also be admitted that although the evidence of Dutch origin is not only fairly continuous, but very complete, there are still many gaps, which have to be filled by

suppositions where facts are wanting. On that account there may be still room for those who doubt the story, and who think that their own theory of the origination of the Ayrshire should be preferred.

Between 1500 and 1600 the writing of books, particularly books on agriculture, seems to have been more common in England than in Scotland. During that period little was written in Scotland throwing any light on the class of cattle found in different districts, but in England a considerable number of books were printed during that century on agricultural matters, and many of these give some little information regarding the cattle of different districts.

Leonard Marscal belonged to a Sussex family, and is believed to have been born about 1546. He had travelled on the Continent, and published his first book in 1572, but as it related to horticulture it does not presently concern us. He seems to have had a wide experience of agricultural matters, and to have been a voluminous writer for his day, for in 1581 he wrote a book on Poultry, another in 1590 on Fishing, and another in 1596 on "The Government of Cattel." This book went through several editions, and in one of the last it is stated that he was chief farrier to King James, so that he was likely to know his subject fairly well. In the book referred to he says—"Also for oxen to labour, the black ox and the redde ox are best, and the browne or greezled ox nexte ; the white one is worst of all colours." Again when referring to cows he says, "The browne colour mixt with white spots is good." It seems therefore that at that date there were black, red, and white breeds of cattle, and that the best cows were red with white spots. From what others have written later on it is most probable that the cattle referred to were Dutch or of Dutch origin, although no mention is made of such.

A little later another most voluminous writer, viz., Gervase Markham, an ancestor of the present illustrious family of that name, published several very interesting books on farming matters. He was born in 1568 at Cotham, near Newark in Nottinghamshire. As a young man he served as a soldier in Holland, and owing to his knowledge of horses he was commissioned by King James I. to buy him an Arab charger. He died in 1637.

In his books there are many references to the different kinds of cattle found in the various counties, but the following extract from one of them will suffice :—"As touching the right Breed of Kine through our nation, it generally affordeth very good ones, yet some countries do far exceed other countries, as Cheshire, Lancashire, Yorkshire, and Derbyshire for black kine ; Gloucestershire, Somersetshire, and some part of Wiltshire for red kine ; and Lincolnshire for pide kine." Pide cattle, sometimes spelled pyed, are those of brown and white, the white being in large blotches and each colour quite distinct.

The only pure breed of cattle in Britain which are so coloured at the present day are the Ayrshires, and the fact that both Leonard Marscal and Gervaise Markham specially refer to them at this early date, has a particular bearing on the origin of the Ayrshire. Neither of these two writers specially states that the pyed, or red and white cattle referred to were Dutch, but there was no pure breed in Britain of that class at that date, and Holland was not only the nearest but the most likely country to furnish such.

All the circumstances, both political and social, were at this time highly favourable to a close connection and continued intercourse between England and Holland. Elizabeth had recently ascended the throne of England, and in 1572 the Netherlands revolted against Spain. As Spain was no friend of England, large numbers of Englishmen joined the Dutch army as volunteers, and it has been estimated that at one time there would be about 5000 English in the Dutch army. A large number of these men would either be directly or indirectly connected with farming in England, and would naturally take an interest in the Dutch cattle. From the quotations already given from the books of Leonard Marscal and Gervaise Markham, it appears that considerable numbers of Dutch cattle were already in England, so that some of the volunteers might be familiar with their good qualities. The number of cattle imported earlier in the century seems to have been considerable, and the intercourse between the two countries at this time would be very favourable to a further increase of their number. The religious persecution of the times caused great numbers of Flemings to seek shelter in England and Scotland, each of which would have some influence in further increasing the number of Dutch cattle in Britain. Holland at that date was generally acknowledged to hold the highest position in agriculture, so that the intercourse between it and Britain could not fail to be of benefit to the latter.

It was during this period that a great part of the Fen lands of England was drained, and as the Dutch were the only people who had any experience of that class of work, considerable numbers of them were brought over to carry it out. The work extended over a very long period, which would not only help to increase the number of Dutchmen, but also of Dutch cattle. It appears, however, that the greatest number of the latter came before 1600, as during the 17th century it was not legal to import cattle into England, but there was no restriction on their importation to either Leith or Ayr, which at that date was the principal port of the Clyde.

During the 17th century there was a great advance in agricultural methods, turnips, clover, potatoes, sainfoin, &c., being introduced and more or less cultivated where the circumstances were favourable. The literature relating to farming was largely increased compared with what it was during the previous century

or two, but it was only occasionally that any of it was devoted to cattle, Gervaise Markham's books of 1608 to 1631 being the most noticeable. In 1642 Sir Cornelius Vermuiden, a native of Holland, and an officer in Cromwell's army, wrote a book on the "Drayning of the great Fenis," and between 1645 and 1659 Samuel Hartlib, published a large number of useful books on various subjects.

Between 1707 and 1761 John Mortimer published several editions of two books, and in his "Whole Art of Husbandry" he says—"The best sort of cows for the Pail, only that they are tender and need very good keeping, are the long-legged, short-horn'd cow of the Dutch breed, which is to be had in some places of Lincolnshire, but most used in Kent." If one is to judge from Mortimer's remarks "which is to be had in some places of Lincolnshire," it would seem that even at this date the Dutch cows were not very numerous, but that they were well known as good dairy cattle. It should be remembered that prior to this date, cattle were kept principally for draught purposes and for their flesh, and only to a limited extent for dairy purposes. In 1726 John Lawrence speaks of the Dutch breed with short horns. (See Cutler's "Short History of English Agriculture," 1909.)

In 1756 T. Hale wrote a book which he called "A Compleat Body of Husbandry," in which he has more of a definite nature to say regarding the Dutch breed of cattle than many of the others. In one part he says—"Yorkshire oxen are in general black all over, and they are very large, and form a valuable kind in every respect. There are none that exceed them for labour, and few feed like them. . . . The oxen of Lincolnshire are in general red and white, they are very bulky and equal to any in value. The oxen of Somersetshire and some of the adjoining counties are naturally red. They are also a very fine, large, and valuable breed. . . . The reader is not to suppose, from what is here said, that all the oxen of Yorkshire are black; all those of Gloucestershire and Somersetshire red; or all the Lincolnshire oxen pyed. These are the genuine and proper breed of each of these several counties, but the graziers have mixed them more or less in each county."

In another part he says—"The fine Dutch breed have long legs, short horns, and a full body. They are to be had in Kent and Sussex and some other places, where they are still carefully kept up without mixture in colour, and where they will yield two gallons at a milking, but in order to do this they require great attendance and the best of food." It is worthy of note that in this quotation he says, "where they are still carefully kept up without mixture in colour," he would seem to infer that the breed have been in these districts for a long time. These quotations from Hale's book clearly indicate the area and in a rough way the proportion of the cattle which were Dutch, or of Dutch extraction, in these

districts, as estimated by what seems a very competent writer in 1756.

Arthur Young, in his northern tour about 1770, says—"In Yorkshire the common breed was the short horned kind of cattle called Holderness, but really the Dutch sort." The district of Holderness is that surrounding the Humber.

Again Youatt in his "Complete Grazier," published in 1864, has the following regarding this matter—"The shorthorned cattle, under which denominations are included the *Holderness and Teeswater breeds*, have been supposed to have derived their origin from a cross with some large bulls that were imported by Sir William St. Quintin, nearly a century ago, from Holland into Yorkshire, and in the east and north ridings of which county the two latter breeds have been long established and deservedly esteemed, . . . and it is from some of that stock, so maintained, that the present *improved short-horn cattle*, sometimes known as the *Durham breed*, is supposed by some to be descended."

A few years later George Culley published his "Observations on Live Stock" in 1786, from which, owing to its importance, and the bearing it has on the supposed connection between the Dutch breed of cattle and the Ayrshire, a fully longer paragraph may be quoted than has been done from some of the previous writers. Culley was a Northumberland farmer, who in his youth had been a pupil of Bakewell's during the formation of his famous herd. His book clearly shows that he had a keen interest in and good knowledge of cattle, and on that account what he has to say of Dutch cattle is of considerable importance in connection with the history of the Ayrshire breed.

When referring to this breed of cattle he says—"There are many reasons for thinking that this breed has been imported from the Continent. First, because they are still in many places called the Dutch breed. Secondly, because we find few of these cattle anywhere in this island except along the east coast, facing those parts of the Continent where the same kinds of cattle are still bred, and reaching from the southern extremity of Lincolnshire to the borders of Scotland. . . . But thirdly, I remember a gentleman of the county of Durham (Mr. Michael Dobinson) who went in the early part of his life to Holland in order to buy bulls; those he bought were of much service in improving the breed, and this Mr. Dobinson and his neighbours, even in my day, were noted for having the best breed of shorthorned cattle, and sold their bulls and heifers for great prices."

Sinclair, in his "History of the Shorthorn Breed of Cattle," states that Culley was born in 1730, so that at the time his book was published he would be 56 years of age. From the manner in which he refers to Michael Dobinson, it would seem that in Culley's youth he was a man in middle life or old age, so that the period

during which he went to Holland for bulls would be about or shortly after 1700. It has been previously stated that importations of cattle into England were prohibited for about 100 years prior to that date, so that Mr. Dobinson has evidently begun to bring stock from Holland at or about the time that the prohibition was withdrawn.

From the quotations which have been given from writers, beginning with 1572 and continuing right on to 1786, it is proved beyond doubt that the flecked or pyed red and white breed, which were more or less common in the neighbourhood of the Humber, or the Holderness district, were undoubtedly the descendants of previously imported Dutch cattle, or recent importations of that breed. When there is taken into account the troublous times which extended over the whole of that period, and the backward state of the country at the time, it need surprise no one that the records of cattle breeding are so meagre, but that there are any at all, or that any one found time to record such in books.

THE DISTRICT WHERE THE BREED ORIGINATED.

It is generally acknowledged that what is now known as the Ayrshire breed of cattle first became sufficiently numerous to attract attention in the parish of Dunlop, in the district of Cuninghame of North Ayrshire. Paterson in his "History of Ayrshire" vol. III, part I., says:—"Cuninghame is understood to have derived its name from the Celtic *Cuinneag*, a milk pail or churn, the district having been celebrated from a remote period for its dairy produce and general fertility. *Ham* or *hame* may have been added to the original *Cuinneag*, as signifying the place of the *Cuinneags*. In a charter of David I. to the Cathedral of Glasgow, prior to 1153, the district is designated *Cunegan*, which is evidently the plural of *Cuinneag*,* and in later documents of the same description it is styled *Conyghame*, a strong presumption in favour of the alleged derivation of the word." It therefore seems probable that in the early days when milk was only produced in Summer, and when the cattle belonging to a family or clan were all grazed together, that *cuinneags* or stoups would be used for carrying the milk from the district where the cows were grazed to the home, in preference to driving the whole herd. Although this practice has ceased to be followed long ago in Scotland, it is still common in isolated instances in England and Ireland, and is an every day occurrence in Holland and Denmark. The probability therefore is that the name Cuninghame means the home or district of the milk stoup or pitcher, indicating thereby that in early times the country was already noted for its production of

* In modern Gaelic, the common stoup, or what is usually called a pitcher, generally used half a century ago for carrying water from a distance, is still called by this name.

milk. This must have been very early, because the first half of the word is Celtic and the latter half Saxon. It would seem as if the double name had originated sometime in the Saxon period of our history, or say after the accession of Edgar to the throne of Scotland.

Timothy Pont, who surveyed the district and wrote his "Cuningham Topographized" about 1600, says "that it is so named because that in it hath some tyme beine the Royall habitation of a King; for so doeth the vord Kuning, being Danish, signifying a king, and Hamin, vich signifieth sometime a habitatione, as if one wold say the king's habitatione or duelling." All over Britain there are a large number of places having names in many respects similar to Cuningham. Near at hand there is Eaglesham, and further away Whittingham, Smailham, Rotherham and Birmingham, &c.

Pont also says that when he surveyed the country in 1600 an old castle stood where the modern mansion of Cuninghamhead now is. In Robertson's Cuningham it is stated that a family of the name of Cuningham had owned the property since about 1400, and that their residence, which had previously been called Woodhead, had been changed by them to Cuninghamhead.

That there were few or none of what are now known as the Ayrshire breed of cattle in 1600 or the immediately succeeding years may be inferred from the inventories attached to a great many wills of persons of note in Cuninghame, which are given in the reprint of Pont's book which was issued by the Maitland Club in 1858. In one of these Andro Craufurd of Baidland, within the parochin of Dalry 16th February, 1609, the following occurs:—"Item, to little Jeane, Davidis dochter, the quhyt hornit kow, or ellis ane vther als guid," which put into the language of the present day would read as follows: To little Jean, David's daughter, the white horned cow, or else another as good.

In the will of William Muir, elder, of Rowallane, Kilmarnock, dated 1616, the following occurs:—"The said Williame had pertaining to him, the tyme of his deceis, Fourscoir and thrie tydie ky—Furrow ky, with thair stirkis, fourtie ane—Thrie bullis—Nyntein stottis and quoyis of thrie yeir auld. . . . Thrie cursour staigis of thrie yeir auld—Twa gray fillies—Twa twelf moneth auld foillis—ane auld broune meir—ane broune staig—ane meir at Lochgoyne, &c., &c. In numerous cases in other wills "tydie ky" are referred to. This expression is still common in the district and means a cow in calf. A stallion was called a staig at that date, and the word is still occasionally used in the district. A quoy (quey) is a heifer.

Out of a great many instances where cattle of various kinds are referred to, the first is the only case in which their colour is mentioned. While the majority of cattle seem to have been black, the mention of "the white horned cow" indicates there were white ones, and seeing the horned cow is specially mentioned, this seems to indicate that all cattle then were not horned.

EARLY NAMES OF THE BREED.

Long before the breed was known as the Ayrshire, it had increased in number to such an extent as to be of considerable importance, and to be well known over a wide extent of country. The local name by which the breed was first known was that of Dunlop cattle, and this one seems to have been generally used from the introduction of the breed to sometime between 1790 and 1800. Several of the early writers refer to the name as having been derived from Mr. Dunlop, of Dunlop House, who was credited with being one of the introducers of the breed. Others say the name arose from the parish of Dunlop, in which Dunlop House is situated. It is a matter of little importance from which of the two sources the name arose, as each may be said to be a part of the other. There seems, however, to be little doubt that it was in this district, if not in this parish, that the breed became sufficiently numerous to be given a separate name. Unless the new breed of cattle had from the first a distinctive name, which they seem not to have had, the most natural thing to do, as soon as they began to be distributed over the country was to call them by the name of the introducer, or rearer, or farm, or parish, or district from which they came. For a time, therefore, they were only known as Dunlop cattle, and no other seems to have been used as long as the breed was confined to the surrounding parishes, which are comprised within the district called Cuninghame, which is that part of the county of Ayr north of the River Irvine.

Apparently, however, before 1800, the breed had become distributed over a very much wider area than the northern district of the county of Ayr, and a name having a wider significance than that of a family, farm, or parish began to be used, viz., that of Cuninghame cattle, as representing the district from which they came. This name seems to have continued in common use up to between 1810 and 1815, by which date these cattle seem to have become well distributed not only over the whole of the county of Ayr, but more or less over all the counties of the south-west of Scotland.

It was about this time that the name Ayrshire began to be substituted for that of Cuninghame, and one of the first occasions, if not the very first, on which we find the name Ayrshire publicly used is in 1803. On page 6 of the "Farmers' Magazine" of that year it is mentioned that a Mr. Dunlop had brought Ayrshire cows to Caithness. In the year 1812 the Highland Society published a report on the Rhins of Galloway, by the Rev. William Donaldson, and in it the name Ayrshire, as applied to this breed, is also referred to. In 1814 it again appears, when the Highland Society gave premiums for the best bulls and heifers of the Ayrshire breed. It is a curious fact, and one which seems to indicate that the breed was well spread at this early date, that the first premiums given by the Highland

Society were not for cattle in the Cuninghame district, but were confined to those of Kyle, which is the central division of the three districts into which the county of Ayr is divided. The newspapers of that and succeeding years also refer to the breed as Ayrshires, and seldom use any other name. It seems therefore probable, that as long as the breed was principally confined to the district and parish of Dunlop, it was called the Dunlop breed, but that when it had spread more or less over the parishes comprised within the district of Cuninghame, it became known as the Cuninghame breed, and later on when it overflowed into the neighbouring counties it was known as the Ayrshire breed.

Long, however, before the breed was known by either of the names Dunlop, Cuninghame, or Ayrshire, or probably before there were any cattle of that breed in the country, the district where it originated, or at least from which it spread, was famous over a wide extent of the country for its dairy products. Timothy Pont in his Topographical Account of the District of Cuninghame, written about 1600, thus refers to that part of the country :—“The 2nd degree and parte of this countrey, being a great deall lower than the former (that is the district between Largs, Dalry, and Kilbirnie), is much more fertile in corn and store, being of a deipe, fatt, clayeisch soyle, much enriched by the industrious inhabitants lyming of their ground, quherby the pastures heir, since this experiment ves practised, is become much more luxuriant than befor; quence it is that this pairt of the countrey yeilds a grate deall of excellent butter, as a'll the countrey besyde, but especially the parishes of Steuartoune and Dunlopp. The butter of this countrey in effecte serves a grate pairt of the Kingdome, one aker of ground heir yielding more butter than three akers of ground in any of the next adjacent countreyes.” The first part of Pont’s remarks would seem to refer to the valley of the Garnock, where he speaks of it as being a great deal lower than the part previously referred to, and from it being from three to four miles broad, but farther on it appears as if they were intended to apply to the district embraced in the parishes of Dunlop, Stewarton, and Kilmaurs. The whole of this district is a particularly good one for pasture, and although Pont makes no reference to the cattle, it is very probable that the great yield of butter was as much due to them as to the deep, fat clay he mentions.

The following well known couplet is believed to have been written at or before Pont’s time, and very shortly and tersely explains the farming of the different districts at that period :

Kyle for a man,
Carrick for a coo,
Cuninghame for butter and cheese,
And Galloway for oo.

REPORTS OF THE BOARD OF AGRICULTURE OF 1793 AND 1794.

One of the first duties which the recently appointed first President of the Board of Agriculture undertook in 1793 was to have reports forwarded to him regarding the agriculture of each county in Scotland. These were written by specially selected persons in each county, many of them by parish ministers, and the first editions were printed on quarto paper, with a very large margin. Numerous copies of these were circulated in each county. In the introduction to each it is stated that the report "is now printed merely for the purpose of being circulated there (that is in each county) in order that every person interested in the welfare of that county may have it in his power to examine it carefully before it is published. It is therefore requested that any remark, or additional observation, which may occur to the reader on the perusal of the following sheets, may be transmitted to the Board of Agriculture at its office in London, by whom the same shall be properly attended to, and when the returns are completed an account will be drawn up of the state of agriculture from the information thus accumulated." These reports give the first authentic information, not so much of the origin of the Ayrshire as of its spread at that date, for although there are many claimants as being the first to introduce the new breed, it is to be feared that the principal person or persons who deserve that credit will never be known. The writer of the report on Ayrshire was Colonel Fullarton of Fullarton, in the district of Cuninghame. He was an enthusiastic farmer himself, and from his local knowledge of the district and his wide experience abroad he is likely to have been a fairly reliable writer. His remarks regarding the origin of the Ayrshire go further back and are more full than those of any of the other early writers who refer to them. In justice to him, and in order that his remarks may be fully appreciated, what he says is here given pretty full:—"In Cuninghame, or the northern division of the county, a breed of cattle has for more than a century been established, remarkable for the quantity and quality of their milk in proportion to their size. They have long been denominated the Dunlop breed, from the ancient family of that name, or the parish where the breed was first brought to perfection, and where there still continues a greater attention to milk cows and dairies than in any other part of Scotland." Colonel Fullarton was born in 1754, and when 21 years old was appointed Secretary to the British Embassy in France. Later on he served as a soldier in India, and at the outbreak of war with France in 1793 he raised a regiment of dragoons and another of infantry. He was M.P. for the county for a time, and was therefore a man of great experience. He says the breed has been established for more than a century, which carries us back to the latter half of the previous century, or say 1670 to 1700. His personal knowledge would go half that distance, and what he

learned from the older people may be presumed to be ample proof for the whole of the period to which he refers. As has already been stated, there seems to have been no cattle answering to the description of Ayrshires in 1600, when Timothy Pont made his survey of the county, or if so they were in such limited numbers that he did not think it worth while to refer to them. The period of their introduction, or that during which they became sufficiently numerous to attract attention, seems therefore to have been sometime after 1600 and before the end of that century. This was the period during which the importation of cattle into England was prohibited. It is possible therefore that they may have come via the Humber earlier than 1600, or from that district during the period when importations were forbidden, or they may have come via Leith or Ayr, as Ayr was then the principal port on the Clyde.

Owing to later writers having repeatedly quoted the words of some earlier one, without making due enquiry into the facts, the credit of having introduced the Ayrshire has generally been ascribed to the Earl of Marchmont. In regard to this matter Fullarton says: "It is asserted by a gentleman of great skill and long experience (Mr. Bruce Campbell) that this breed was introduced into Ayrshire by the present Earl of Marchmont, and afterwards reared at the seat of the Earl of Glasgow, whence they are said to have spread all over the country."

In his *Agriculture of Ayrshire*, published in 1811, Aiton says:—"Among other crosses with foreign cows or bulls, I understand that the Earl of Marchmont about 1750 purchased from the Bishop of Durham, and carried to his seat in Berwickshire, several cows and a bull, either of the Teeswater or other English breed of the high brown and white colour now so general in Ayrshire, and that Bruce Campbell, Esq., then factor on his Lordship's estates in Ayrshire, carried some of that breed to Sornbeg in Kyle, from whence they spread over different parts of the county." A bull of that stock was used at Cessnock and latterly at Sundrum. Further on he says:—"I have been told that John Dunlop of Dunlop, Esq., brought some cows of a large size from a distance, probably of the Dutch, Teeswater, or Lincoln breeds, and that much of the improved breed of Cuninghame proceeded chiefly from that origin. John Orr, Esq., of Barrowfield (now part of Glasgow), brought from Glasgow or some part of the east country to Grougar, about 1769, several very fine cows of the colour now in vogue, one of whom I remember cost £6, which was more than twice the price of the best cow in that quarter."

Writing the next year, 1812, to the "Farmer's Magazine," Mr Aiton is more explicit, and the two following paragraphs are from that paper:—

"Prior to 1760 and 1770 there seems to have been about Glasgow, and in the possession of several noblemen and wealthy gentlemen, kept at their country seats, milk cows of a brown colour and of much

greater size than the native breed of Scotland ; and some of these have been carried from time to time into different parts of the county of Ayr, and being generally placed on richer pasture and better fed than the ordinary farm stock were at that time, they yielded a greater quantity of milk and the farmers became eager to procure calves or crosses with them, in hopes of getting similar returns from their progeny. I have been anxious to discover from what quarter this stranger breed came, but I have not yet been fully satisfied as to their origin. I remember to have heard them 40 years ago termed Dutch cows by some and English cows by others, but whether from the one country or the other, or from whence, I have not yet been able to ascertain."

" But from whatever quarter they may have come, it is from them that the brown colour, now so universal in the Ayrshire dairy breed, has become fashionable. Perhaps something of the other qualities of that breed may also have descended to the Ayrshire dairy cows by crossing with them, but I am not of opinion that the present stock of Ayrshire are either completely descended, or that their superior excellence has been entirely derived from these strangers. I am persuaded that they have been brought to their improved state chiefly by better feeding and treatment."

Better feeding can do a great deal, but it alone could not possibly change a black short horned or hornless animal into a red and white horned one, leaving the other qualities out of account. Aiton is unwilling to admit that the improved red and white cow had been imported, but rather favoured the belief that it was a direct descendant of the native breed. All he says seems, however, to indicate Dutch or Holderness origin, and it is very probable that the cows bought by the Earl of Marchmont from the Bishop of Durham, and the cows sent to Grougar in 1769 by John Orr, of Barrowfield, and the brown cows referred to as being round Glasgow were of the same breed ; and judging from their size, milking qualities, and colour, they are likely to have been of Dutch origin. Writing me recently on this matter, Mr. Hamilton, of Woolfords, says :—" Mr. Murdoch, Carntyne, near Glasgow, had some boney brown cows. My father got a bull from him which bred very well." Mr. Murdoch was a noted prize-taker in the early showing days, and the description here given, although short, is quite applicable to the Dutch cows of to-day in the province of Gelderland in Holland.

What is worthy of notice in the above extracts from Aiton's book is that in the one case he says " either of the Teeswater or other English breed of the high brown and white colour, now so general in Ayrshire," and in the other " probably of the Dutch, Teeswater, or Lincoln breeds." Mortimer wrote 100 years before Aiton's time, Hale 50 years, and Culley 25 years, and each of them make special reference to the brown and white cattle to be found between the extreme south of Lincoln and the Scottish border as being Dutch

Culley even mentions Michael Dobinson as having brought bulls from Holland early in the 18th century. In other places this breed is referred to as the Holderness variety of cattle, as Holderness was the district surrounding the Humber, and the cattle were called the Holderness breed, the same as in Ayrshire they were called the Dunlop or Cuningham breed. It is almost also a certainty that between 1650 and 1750 what were known then as Dutch, Teeswater, Durham, Holderness, and Lincoln cattle were one and the same breed, and although as unlike each other at the present time as they can possibly be, the Shorthorn and the Ayrshire have been derived from the same source.

Aiton was in Holland in 1832 and made a fairly extensive tour through it. In his first writings he leaned to the idea that the Ayrshire was an improved breed of the native cattle, but although he had not got away from his old idea, it seems to have been considerably modified by his visit to Holland. He was principally in the provinces where the black and white cattle are, but he says he found a few brown, and adds—"Some of the Dutch cows approach nearly in shape to the dairy breed in Scotland, being lighter in the forequarters and more capacious about the hook bones and flanks. But even these have strong bones, thick skins, and a hard pile of hair."

An excellent report on the farming of the district of Cuningham, in Ayrshire, was published in 1829 by Mr. Robertson, who was then factor to Hugh, twelfth Earl of Eglinton. He had previously held similar positions in Forfar and East Lothian, and had written excellent reports regarding these districts. He was appointed factor at Eglinton in 1811, so that when he wrote of Ayrshire he must have been well advanced in age. On page 569, when referring to the statement of Mr. Bruce Campbell already referred to, he says:—"This Mr. Bruce Campbell was, I presume, of Milrig, in the parish of Galston, and was born about the year 1730, as I know from the family history; and the Earl of Marchmont alluded to must have been that Alexander Hume Campbell who married Margaret Campbell, heiress of Cessnock, in the same parish, and who became Earl of Marchmont in 1724, and died in 1740. The introduction, therefore, of this dairy stock must have happened betwixt these dates, or about from ninety to one hundred years ago, and so far corresponds with the traditionary account. From what particular part of the country they came there is no evidence."

From the above extract it is quite evident that Aiton has been mistaken when he said that the purchase of cattle by the Earl of Marchmont which were ultimately brought to Cessnock was in 1750, as it must have been between 1724 and 1740, or from 10 to 26 years earlier. From remarks by Fullarton and others it seems probable that about this time or early in 1700 many of the county gentlemen in the south-west of Scotland had been importing new breeds of

cattle. It does not appear that all of these were Dutch, but apparently a very large proportion of them were of that breed.

The Ayrshire cow shows few of the characteristics of the Teeswater or shorthorn cow of the present day, and although it has some likeness to the Lincoln, it is not great, but in many particulars it closely resembles the Dutch cow as it existed in Holland during the 17th century. Fullarton, when making reference to their origin, says :—In former times a proportion of Dutch or Holderness cattle had been propagated, and when well fed yielded large quantities of milk." When making reference to the country of origin Aiton says : " I am really uncertain as to the district or country from which these stranger cows were brought. They certainly were denominated Dutch cows when first introduced into Ayrshire." During the Reformation and Covenanting times there was considerable intercourse between Scotland and Holland, not only via Humber but from the Clyde and Forth, and it would be the most natural proceeding for those who were cognisant of the great value of the Dutch cow as a milk producer, compared with the breed then common in Scotland, to import them as opportunity occurred. Up to 1730 there were no bleachfields in Scotland, and prior to that date all linens were sent to Haarlem in Holland to be bleached. As the principal old writers agree that they were generally called Dutch, most people would consider it proved that they came from Holland were it not for the difficulty in understanding how the red and white Ayrshire could be derived from the black and white Dutch cow of to-day, without the introduction of some other breed. No other breed in Britain at all resembles it in colour and form, and as the early writers all more or less agree that the breed was derived from outside sources, and most of them mention Holland as the country of origin, there should be animals found somewhere which more or less closely resemble the Ayrshire not only in colour and form, but in dairy characteristics.

Dutch cattle as known in Britain at the present time are invariably black and white. These are what are known in Holland as Friesland cattle. All over the northern and north-eastern half of the country, but more especially in Friesland and the adjoining provinces, few cattle are seen but what are black and white. All cattle in these provinces are, however, not so coloured, for there are considerable herds all of which are brown and white. The Dutch Cattle Herd Book is supported principally by the Friesland breeders, most of whom have black and white cattle only, yet they say that the red and white breed are as pure Dutch cattle, as are those that are black and white, and each is allowed entry in the Friesland Herd Book on the same conditions.

While black and white is the predominating colour of the cattle of the whole of North Holland, these colours are very rarely seen in the province of Gelderland. There the prevailing colour is red and

white, and as few black and white are to be seen as are found among ordinary Ayrshire herds. In all cases, however, the cows of Holland, whether black and white or red and white, are much stronger in the bone and heavier in build than the Ayrshire. They are also longer in the head and have incurved instead of upturned horns; and the udder is usually rounder and the teats longer than those found in the Ayrshire of the present day. With these exceptions, the breeds do not materially differ, and what would be considered a good specimen of either breed would be also good of the other. The differences which exist are no greater than might be expected to result from selection and food supply extending over a period of from 200 to 300 years. The red and white breed more closely resemble the shorthorn in build and general appearance than they do the Ayrshires, which in type are more like the black and whites of Friesland. Both varieties of Dutch cattle are much heavier than the Ayrshire, and about the same weight as the shorthorn.

An important point in the elucidation of this matter is the colour given to Dutch cattle by the old painters. Numerous examples of these are to be found in the picture galleries of the Hague and elsewhere over Holland, and in Britain, and they throw a flood of light on a matter which without them would be almost unfathomable at the present day. One of the greatest of Dutch animal painters was Potter, who flourished in the first half of the 17th century. Robbe, another famous animal painter, also did his best work about this date, and in every one of their paintings the cattle are shown of brown or red and white, and not one is of black and white. Cuyper (1620-1691), many of whose paintings are in Britain, has some of the cows painted by him red and white, and others black and white. Verboeckhoven, another renowned animal painter who did his best work during the latter half of the 18th century, has also given the animals which he painted the red and white colour. In the paintings of Stobberts, executed about the middle of the 18th century, some of the cattle are shown as red and white and some as black and white, while more recent painters almost invariably represent their animals as being black and white. From these it seems as if the red and white breed of cattle was the general one between 1600 and 1750, or at least if there were black and white ones during that period they were so few in number that little notice was taken of them. After 1750 black and white cattle seem to have become more numerous, and the colour appears to have gradually become recognised as the prevailing one of the breed. These silent pictures tell their tale in a more clear and convincing manner than it is possible for any one to do in words, and they throw light on a question which has hitherto remained unexplained.

There seems therefore to be strong reasons for believing that the Ayrshire breed of cattle, where approximately pure, are direct descendants from Dutch ancestors imported between 1550 and 1700

or later, and are not, as some have supposed, a breed gradually evolved from the native animals in the country at that period. It is also evident from the rate at which the breed spread over the south-west of Scotland, that they could not have been produced from the few imported by the Earl of Marchmont early in the 18th century. The probability is that importations extended over a very long period, probably 200 years or more, but owing to the disturbed state of the country at that time it was only when they became comparatively numerous that writers of the day took any notice of them. It is also worthy of note that the earliest writer who gives us any information regarding the Ayrshire, viz., Colonel Fullarton in 1793, considers that the breed was not an improved variety of a previously existing breed, but an entirely new one. His words are as follows :— " It appears, however, that this mottled breed is of different origin from the former flock." He was on the ground at that date, was a man of mature years, and any importations which had been made within the last 100 years would likely be known to or heard of by those with whom he was coming in contact.

BLACK AND WHITE COLOURS AMONG AYRSHIRES

Among Ayrshires of the present day, and for at least the greater part if not the whole of the previous century, there were numerous animals which were presumed to be pure bred, but which were black and white instead of red and white, which is generally looked on as the typical colour of the Ayrshire. In some quarters considerable discussion has arisen regarding these animals, and whether or not they are pure bred Ayrshires, and should or should not be allowed entry in the Ayrshire Herd Book.

All the early writers refer to the native cattle as being black, and this being the case there must have been numerous crosses between the imported Dutch, Holderness, or Ayrshires and the existing breed. At that time very little of the country was fenced, as according to the "Farmers' Magazine" of 1804, page 74, there were scarcely any fences in Ayrshire prior to 1760. Many of the herds grazed on common land, or at least on land to which certain persons had the right of grazing so many head of stock. The Kilbirnie moor or common is even so grazed to the present day. It therefore need surprise no one that there are black and white specimens among Ayrshire cattle, but while some of these may have been descended from the old Scottish breed, the information at our disposal is against that source as their chief or only origin. To use a Mendelian expression, we now know that a hornless breed, at least as far as horns are concerned, is dominant over a horned one. The original black cattle of Ayrshire were hornless or had very small horns, what we now call Galloways, so that if the present families of black and

white Ayrshires had been descended from them they would have been more or less hornless, whereas they have horns much the same in length as red and white Ayrshires, although in some cases they may not be so strong. These facts lead to the supposition that they must have sprung from some other origin, and the chances are that that source was also Holland, and that the black and whites were later importations than those of red and white, and if so in all probability came from north Holland.

As has previously been shown, the prevailing colour of Dutch cattle prior to 1750 seems to have been red and white, but the probability is that for many years before that date a proportion of the animals were black and white. Either from fancy for the colour or from the belief that these animals were better milkers, or better suited to the climate than the others, breeders in the province of Friesland increased their number till in that district black and white is now the prevailing colour. Although there is no definite record of the fact, it is just as likely as not, that some black and white specimens were imported into Scotland, particularly during the period when these were coming into favour. One can easily understand that seeing the original cattle of the country were black the people here would likely take more kindly to those which were black and white than to the red and whites. In addition we now also know that black in cattle is dominant over red or red and white, so that if even a very few of these were introduced and mated with those of a red and white colour, their number would increase at a greater ratio than the others.

While therefore there is a possibility of the black and whites among Ayrshires being descendants of crosses between Dutch or Ayrshire cattle and the original black cattle of the country, the probability is that the bulk of them are direct descendants of the black and white cattle of Holland of the present day. Whatever their origin may be, they have now been mated so long with Ayrshires that they must be as pure Ayrshires as those that are red or white, or a mixture of red and white, and are certainly equally as good milkers as the others. Both the black and whites and red and whites are allowed entry in the Dutch Herd Book, and the same course is followed by the Ayrshire Herd Book although the proportion of colours here are reversed.

While the total number of black and white cows is comparatively small, the number of really good milkers and prize-taking cows which have been among them has been relatively large. Samuel Pate, East Browncastle, Strathaven, uncle to Mr. Hamilton of Woolfords, about 1827 had two cows, Toshie and Blackie, which took first prize at the leading shows for about six years. Mr. Hamilton informed me that these cows came from Galston or Darvel. His father received a heifer calf out of Toshie, and she was the dam of his famous prize-taking cow Blackie. The late Lawrence Drew had another which was known as "Drew's Wee Blackie," which was quite a famous prize taker.

THE EARLY DISTRIBUTION OF THE AYRSHIRE.

Anything which is new is rarely welcomed in any community, no matter how valuable its merits, which always take a time before it can be thoroughly proved and appreciated. Even after that, in the case of cattle, there is considerable prejudice to be overcome, and when the stock are ultimately wanted the demand very likely exceeds the supply, owing to the slow rate at which cattle breed and the number wanted to keep up the stocks to their original size. It may therefore be supposed that at first the distribution would only be from one neighbour to another, or at most between persons living at no great distance away. At that time when any one left a farm they rarely moved so far as is customary for farmers to do at the present day. The first instance we have recorded of a whole stock of Ayrshires being moved into a new district is in 1790, when James Fulton removed from the parish of Beith to the farm of Jamestown, near the Maidens, in the parish of Maybole. There are still Fultons farming in Beith parish. The cattle brought by James Fulton are said to have been the first Ayrshires which were taken into the southern district of Carrick. The James Fulton referred to was the great-grandfather of Thomas Fulton, presently in Shiels, Renfrew. As showing the prominence to which cattle breeding had attained in Ayrshire at this early date, it may be mentioned that the first cattle show held at Kilmarnock was in 1793, the Society having been established as a Farmers' Club in 1786. The Highland Society had been giving annually premiums for bulls in various districts from 1789, but this was the first recorded occasion on which a regular show or competition, such as we know it, was held.

In the report to the Board of Agriculture on the County of Renfrew published in 1794, the writer, when referring to the parish of Mearns, says:—"It is all enclosed. The parks or enclosures consist of from eight to ten acres, renting at from £1 10s to £2. They are stocked with the finest milch cows anywhere to be seen, mostly of a brown and white colour, purchased chiefly in Ayrshire when in calf at from £8 to £10 each. They never breed cattle in this part of the country, but always sell their calves when dropt at from 4s to 6s each." This description of dairying in the Mearns, written 115 years ago, equally applies to the farming pursued there at the present day. The method followed of slaughtering the calves when dropt, or when a few days old, clearly indicates that at that early date the supply of Ayrshires was quite equal to the demand, otherwise the calves would have been kept alive. Not only so, but this trade seems to have been firmly established for years before, as at that date the farmers had ceased to rear cattle because they found they could easily and cheaply supply themselves from Ayrshire. The controlling factor then, as now, would be the value

of the milk, or butter made from it, as it would be found that it took as much money in milk to rear a calf as it was worth after being weaned or even later.

In the corresponding report on Lanarkshire, or as it was then called, Clydesdale, little is said about the breed or colour of the cows, although considerable space is devoted to dairying. A second edition was published in 1798, and a third one in 1806, and in the latter, when referring to the Ayrshire, the writer says:—"This valuable breed of cattle are in greater perfection in the northern district of Ayrshire, and in the neighbouring county of Renfrew, and it is probably from thence they are derived, numbers of young cows from these quarters being brought for sale to the fairs at Rutherglen. The inferior breeds of cattle are gradually giving way to these through the whole country, and the size of the cattle is increasing in proportion to their feeding."

In several of the reports for the other counties of Scotland, all of which were written between 1793 and 1794, reference is made to this same breed of cattle from Ayrshire. This applies particularly to the reports on Dumbarton, Dumfries, Roxborough, and Wigtown. Those for Banff, Berwick, Moray, Peebles, Perth, Roxburgh, and West Lothian all refer to Holderness cattle as having been introduced. The Shorthorn, as we now know it, was not then in commerce, although in course of formation.

The Transactions of the Highland Society for 1811 have a paper on the Agriculture of South Ayrshire by the Rev. William Donaldson, minister of Ballantrae. When referring to dairying matters he says: "Scarcely any other kind of horned cattle is to be seen than the well known Cunningham breed of milch cows." In the "Farmers' Magazine" of 1811 Aiton refers to Fulton of Beith being the first to introduce Ayrshires into that part of the county in 1790, and if he is correct in stating that he was the first, the breed must have spread with great rapidity to effectively displace the older breed in twenty-one years.

In 1812 the Transactions of the Highland Society have a report on the agriculture of the Rhinns and Machers of Wigtownshire, which is also written by Mr. Donaldson. In it the following occurs:—"The dairy husbandry has been set up by strangers coming from Ayrshire, and has since been followed by some of the native inhabitants." Further on he uses the expression "the true Ayrshire breed of milk cattle." This is one of the earliest, if not the first occasion, on which this class of cattle is called the Ayrshire breed, and it is worthy of notice that the same writer a year before refers to them as "the Cunningham breed of milch cows."

In 1812 Aiton wrote as follows in the "Farmers' Magazine"—"Not fewer than 1000 cows of the proper Cunningham dairy breed have been carried from Ayrshire annually for several years to other counties of Scotland and England, and some of them may now be

found in every shire from Caithness to Kent, while the demand for them is every year increasing."

The first persons to take Ayrshires to Wigtownshire were the ancestors of the present Ralston and Cochrane families of that county. They came from Ayrshire or Renfrewshire, or both, about 1802, and descendants of theirs have continued to be prominent members of the agricultural community up to the present time. Writing to the "Farmers' Magazine" in February, 1812, Aiton says:—"Mr. James Ralston, of Fineview, Kirkcum, carried them there in 1802, and Andrew Lusk planted them on the Stainchar in 1804." He had been at Mr. Ralston's farm, and says "he had 60 excellent cows of the proper Ayrshire breed" at his visit.

The first stocks of Ayrshires taken to Arran were by Mr. Speirs, grandfather to John Speirs, the present occupant of Bennecarrigan, who came to the farm of Clachaig from the neighbourhood of Paisley about 1813. Mr. Neilson, from Renfrewshire, also began at Sheddock about the same date. It is not known at the present time whether or not they took Ayrshire stock with them, but Mrs. Hunter informed me that when her brother, James Allan, eldest son of James Allan, Blackstone, Dalry, went to Balnacool in 1838, there were Ayrshire stocks on both these farms. James Allan took Ayrshires with him also. This was the year before the Eglinton Tournament, which was a notable event in the history of Ayrshire.

Mr. Aiton in a paper on Bute and Arran in the "Farmers' Magazine" of 1814, has the following:—"The Ayrshire dairy cows have found their way into Bute, and the advantages of that species of husbandry begin to be appreciated."

Robert Hunter, St. Colmac, Bute, one of the Hunters of Chapelhill, Ardrossan, had a noted herd of Ayrshires in the early thirties of last century, but whether or not he was the first to introduce them into the island, or in what year it occurred, no record now remains. William Hunter, late of Machribeg, Southend, Campbeltown, but originally from Poteath, West Kilbride, who is now 96 years of age and in excellent health both of body and mind, informs me that between 1835 and 1845 the Ardrossan Farmers' Society was in a very flourishing condition, and that there was keen competition between the stock from William Hunter, Montfod, Ardrossan; James Allan, Blackstone; Alexander Wylie, Holmbyre; and Theo. Paton, Swinlees; Robert Donald, Lintseedridge, all of Dalry; and Robert Logan, Mains, Kilbirnie, all of whom had noted herds at that date.

It is not now known who introduced the Ayrshire into Kintyre, or when it happened, but when William Hunter went to Machribeg in 1844 there were several stocks in the district. He took Ayrshires with him. As showing the price which good specimens of the Ayrshire brought at that early date, it may be mentioned that Mrs. Hunter's tocher cow was sold by her father, James Allan, Blackstone, for £25 before she had the opportunity to remove it to Campbeltown.

It was then the custom for every farmer's daughter to have the choice of any cow in the herd as part of her dowry.

A PIONEER IN AYRSHIRE DAIRYING.

William Harley was a Glasgow merchant, who early in last century carried on a large dairy at the top of what is now known as West Nile Street. This establishment he called Willowbank dairy, and here he had accommodation for 300 cows. He opened it in 1810, and four years afterwards he had 260 cows on the premises. For that early date his ideas regarding byre construction must have been far in advance of his time, and would even put to shame many buildings of the present day. So famous was this dairy, that it was visited by the Grand Duke Nicholas of Russia, who afterwards became Czar; the Archdukes John and Lewis of Austria, and other German princes and notables, &c. In 1814 the Highland Society sent a deputation of their directors to inspect and report on what Mr. Harley was doing, after which they awarded him a piece of "plate" for having constructed a dairy establishment upon a new and extensive plan, . . . which was ascertained . . . to possess important advantages." William Harley was a great admirer of the Ayrshire, and in his dairy he used them to the exclusion of all others. In 1829 he printed a book entitled "The Harleian System of Dairying," in which he explains in detail his method of stalling, feeding, and general management. This man would undoubtedly be called a theorist or visionary 100 years ago, but more than what he advocated then as being desirable, is now demanded by Act of Parliament

THE EXPORTATION OF AYRSHIRES TO FOREIGN COUNTRIES THE STATES AND CANADA.

In 1822 the first Ayrshires are said to have been sent to New York, but by whom or from what stocks has not been recorded. Others went to Massachusetts in 1830 and again in 1837, after which consignments were sent annually for about 25 years. The Ayrshires of the New England States are believed to more closely resemble the type of cow common in the south-west of Scotland in the first half of last century than those of any other country. They are more red than white, have smaller horns than is commonly met with at the present time, and these are often curved inwards instead of upwards, as is the modern fashion. They have also much longer teats than are usually met with among Ayrshires in Scotland, and have softer hair and thinner hides than are often seen at home. No breed seems to have adapted itself so well to the soil and climate of New England as the Ayrshire has done, and everywhere it seems quite at home.

AUSTRALIA.

The first consignment of Ayrshires is presumed to have been taken to Australia in 1822 or 1823. At least about these years John Wylie, brother of the late Alexander Wylie, Holmbyre, Dalry, uncle of Alexander Wylie, presently farming there, and Mrs. Crawford, late of Knockewart, and also of the late Mrs. Hunter, of Machribeg, Campbeltown, who was a large farmer in Australia, took an Ayrshire bull and two heifers to Sydney about that date. The passage is reported to have occupied nine months. This fact has been reported to me by both Mrs. Hunter and Mrs. Crawford. Mrs. Hunter, who was a sister of James Allan, Balnacoolie, John Allan, Capringstone, and Andrew Allan, Munnoch, died 1908, at 87 years. She had a great memory, especially for pedigrees and dates, and the year before she died she furnished me on various occasions with many of the notes reported here. Mrs. Crawford was a daughter of Alexander Wylie, of Holmbyre, and is still living and her age is now 86 years. Both ladies had the information from their mothers, and in each case it was almost identical in every detail. Mr. Hunter is now 96, and is still very active, but while he was able to add to the general fund of knowledge, he had not the remembrance of the details to anything like the extent that Mrs. Hunter had.

SWEDEN.

After our own Colonies, Sweden has probably imported more Ayrshire cattle than any other country. The late Andrew Allan, Munnoch, Dalry, was judge of Ayrshires at the Royal Show at Kiburn, London, in 1879, and he there met the late Alfred Nathorst, who was sent over by the Government of Sweden to buy Ayrshires. From that date forward Mr. Nathorst came regularly to Munnoch for twelve years, and on each of these visits he usually bought from 40 to 60 head of various ages and sex, and on one occasion he had as many as 84 of all kinds. The first few years he purchased a considerable number of cows in calf, but the losses which occurred during the journey were so great among these that purchases of that class of stock ultimately ceased entirely. His purchases were principally confined to two-year-old heifers and yearling bulls, of both of which he was acknowledged to be a very good judge.

After Mr. Nathorst's death the work was continued on behalf of the Government by Mr. Gustaf Liljhagen, who took away considerable drafts annually for ten years. It was during Mr. Liljhagen's time that the demand arose not only for cattle eligible for the Ayrshire Cattle Herd Book, but during a part of the time he also stipulated that they should pass the tuberculin test. He bought some very good cattle, and owing to the care with which they were selected, he paid much higher prices for some of the stock he purchased than had formerly been done. Among those bought

by him was Lessnessock Sensation, for which it was reported he had paid £120. Mr. Liljhagen retired in 1898, and was succeeded by Mr. Josef Ekelund, who came to Scotland annually for several years, and took away considerable drafts. It is estimated that the late Mr. Andrew Allan and his family have sent to Sweden about 1000 head of Ayrshires, and as there were several private buyers beside the Government, the number altogether taken to Sweden must have been between 1500 and 2000 cattle, a considerable number of which were bulls.

OTHER COUNTRIES.

For about ten years or so Finland has received a considerable number of Ayrshires. In a country so far north as this, a hardy breed like the Ayrshire should be of great value to them, and it is pleasant to know that it gives very general satisfaction. Within the last few years South Africa has received several consignments of Ayrshires, and in 1906 the Indian Government took out 10 yearling bulls. These were distributed over the different farms in the occupation of the Government, principally in the hill districts. These bulls are used for crossing with the native Indian cow, and before trial it was thought that two serious difficulties would have to be overcome before the breed could be very extensively used. The one was the acclimatisation of the bulls, as it was feared that they would be unable to live in the climate of even the hill districts of India, and the other was that the cross with the native cow might not be a success. Contrary to expectation they have stood the climate well, and up to the time of writing have remained quite healthy. The Indian cow belongs to what is thought to be a very old breed, and has a hump on her back, and like the buffalo drops excessively between the horns and the tail head, and is in consequence anything but a good looking or symmetrical animal from our point of view. It was thought that the Ayrshire, being what was considered a comparatively recent breed compared with the Indian, the first generation would resemble their dams more than their sires. Strange to say the Ayrshire has proved very impressive when mated with the Indian cow, and none of the numerous first generation show any tendency to develop a hump, and are much more straight in the back, and have less drop at the tail head, than their mothers. None of the crosses have yet had a calf, so that it is not known how they will turn out as milkers, which was really the main object of the experiment. All the bulls sent to India were out of cows with good milk records, some of them being very good in that respect.

NOTABLE EARLY HERDS—SWINLEES.

Between 1800 and 1830 the Ayrshire seems to have grown immensely in public favour, and about that period to have been

rapidly spread over the adjoining counties. The favourite herd at this early period, and the one which exercised probably a greater influence on the breed than any other of this period, was that of Theophilus Paton, of Swinlees, Dalry. That part of the county is principally held by occupying owners, and Mr. Paton was one of them. He was born 4th April, 1778, and died 18th April, 1872, at 94 years of age. He had a brother Will who was a Highland cattle dealer, who died on 18th October, 1858, aged 79 years. The writer quite well remembers Will's funeral, and being a neighbour, he was often in the company of the elder Mr. Paton, from whom he received direct many of the following notes regarding this particular herd.

The Theo. Paton referred to here was in America for a short period when he was a young man, and at the earliest it must have been 1800, and very likely somewhat later, before the herd was acknowledged to be in any way superior to those of his neighbours. Theo. Paton often repeated to me the story that the basis of the herd was a cross between an Ayrshire bull and a West Highland heifer. The introduction of any Highland blood into the Ayrshire has often been disputed, but as far as this particular instance is concerned there is no room left for doubt. That eminent exhibitor and judge of Ayrshire bulls, the late Wm. Bartlemore, of Paisley, whose grandmother was a sister of Mr. Paton's, in a letter on this subject to the "Scottish Farmer" of 11th September, 1897, says that this animal was a Skye heifer, and that "The first progeny was a red heifer calf, but the dam in milk exhibited such pre-eminent qualities of teat and udder, that he again so mated her for years. This undoubtedly formed the nucleus of his noted Ayrshire herd, and through it almost immediately of those of Parker of Nether Broomlands, Irvine; Reid of Auchengown, Lochwinnoch; Love of Threepwood, Beith; and Robertson of Hall, Neilston." What proof Mr. Bartlemore had for stating that the heifer came from Skye, or as he says further on from Ensay, I have no means of knowing, but I have no remembrance of the old man ever having said where it came from. Further on in the same letter, Mr. Bartlemore says, "Swinlees Ayrshires were noted more especially for their size of body, volume of udder, neatness and perpendicularity of a large corky teat, brown colour; with very dark sides of head and neck. There are those alive who point to one particular brown cow at Swinlees whose circumference round the teat would be incredulous, now when we desire to be veracious." In a communication to the "Scottish Farmer" of 7th August, 1897, on this subject Mr. Hamilton late of Woolfords, Cobbinshaw, Lanarkshire, says that "Mr. Paton, of Swinlees, had the best stock in Ayrshire." He had visited the stock once or twice when he was a young man, in company with the late Lawrence Drew, and his recollection of the stock, as described to me by himself, is very much as stated by Mr. Bartlemore, who obtained

his information from several persons then alive, who were intimately acquainted with it. During my connection with the family there were no Ayrshires at Swinlees, as Mr. Paton was then too old to look after them. Mr. Hamilton is now 78 years of age, and writing me recently on the subject, says "they were grand commercial cows with well made bodies, and exceedingly good at the flank and teats." The appearance of these cows seems to have impressed themselves very vividly on Mr. Hamilton's mind, as he is still enthusiastic over them. At the moment Mr. Hamilton will probably have judged Ayrshires longer than any one now living as it is sixty years since he first judged at Lesmahagow.

Although Mr. Hamilton is probably the only person now living who had inspected the Swinlees herd, the late Mrs. Hunter, of Machibeg, could go much further back than Mr. Hamilton, and go into details in a way which few could have believed other than those who knew her. Six months before she died she informed me that her father was commended at the H.A.S. Show of 1835 at Ayr for a bull called Jock the Laird. This bull was off the Swinlees breed, and she said "he was dark brown with black points." In writing me re this, she says, "The Swinlees herd was the leading prize-taking one at this time," that was 1835 and following years. Mrs. Hunter also mentions that about this time, and for many years after, the late Mr. Craig, of Polquheys, came regularly to Dalry and Kilbirnie for young stock, which he sold in the Cunmock district.

It was about this time that the Ayrshire began to have stronger horns than formerly, and with the points turned upwards instead of inwards; but whether or not these changes were gradually brought about by natural selection, or by the influence of the Swinlees breed, as it was generally called, there is little evidence to show. Owing to its breeding it is almost a certainty that the Swinlees herd would have stronger and more upturned horns than Ayrshires generally had at that date, and as there is ample evidence that bulls from this herd were not only spread all over the country, but were introduced into almost every herd of importance, the probability is that it had some influence on this change. The change was, however, very gradual, for as late as 50 years ago a large proportion of Ayrshires, as I remember them then, had incurved horns. Mr. Hamilton says they were often so much curved inward that the points had to be sawn off to prevent them entering the head.

THE HERD OF PARKER OF BROOMLANDS.

The senior Theo. Paton repeatedly told me that the herd of Mr. Parker, of Broomlands, Irvine, took its origin from animals supplied by him, and Mr. Hamilton, in his paper in the "Scottish Farmer" of 1897, says, "The late Mr. Parker, Broomlands, Irvine, had a wonderfully stylish stock. He took all the prizes in his day

for bulls and yeld animals. All Ayrshire cows have more or less of that blood, but they did not improve the vessel." As is well known, probably no breed of cattle have such a majestic walk, or such a stylish appearance as those of the West Highlands, and knowing as we do of the infusion of West Highland blood into the Swinlees herd, and the close connection between the Swinlees herd and that of Mr. Parker of Broomlands, it may well be asked to what extent was the Broomlands herd indebted to the West Highland breed for the stylishness referred to by Mr. Hamilton.

EARLY PREMIUMS FOR AYRSHIRE.

Although the breed seems to have been well established, and in almost universal use over Ayrshire, Renfrewshire, Lanarkshire, and part of Dumbartonshire and Stirlingshire, and to some extent various other counties in Scotland before 1793, the breed, as we know it to-day, is in great part the result of the showing system. Ayrshire, and more particularly the Cuninghame and Kyle districts, seem to have been about, if not the very first to adopt the system of holding competitions or shows. In fact, the development of the breed may be said to be contemporaneous with the showing system. In no other part of Scotland have shows multiplied to the same extent as in North Ayrshire, and in few counties is showing carried on with the same energy and spirit as in that county at the present day.

The system of holding shows or competitions was introduced into Scotland in 1786 by the Highland Society. In that year a premium of ten guineas was offered in the counties of Caithness and Sutherland to the breeder who should obtain the highest price for at least ten three-year-old stots which had been reared on his own farm, and had not been housed for the last two years. In 1789 the first premiums were offered for breeding stock. The premiums were limited to Highland bulls between two and five years of age in the county of Argyll. The bulls were shown at Connell, parish of Kilmore, on 20th October. A large number of premiums were awarded at this gathering, which in reality was the beginning of our present cattle shows. These premiums were continued in future years, and in due time extended to almost every county in Scotland.

In 1793 the Kilmarnock Society held its first show, and from all appearance it seems to be the first to have had a regular show on much the same lines as those of the present day. The Society had previous to this been a Farmers' Club.

In the "Book of the Farm," 1909, there are the following remarks regarding this club:—"In the minute book of the Kilmarnock Farmers' Club there is a report dated 7th August, 1795, of a discussion opened by Gilbert Burns (brother of Robert Burns, the poet) on 'What may be done to improve the cattle in this country.'

The summing up of that paper ran thus: 'That although much has been done of late in this country in selecting proper individuals of the species to breed from, yet much remains to be done. That particular attention ought to be given to the whole form of the animal, as well as to its colour and horns. That much attention ought also to be given in the selection of the cow as well as of the bull. That young cattle, while in a growing state, ought to be more liberally fed than they too generally are in this country; and that as great a proportion of succulent food as possible ought to be given them in winter while they are calves, and thereafter plenty of ryegrass hay in spring.'

Although the Highland Society had been giving premiums in various counties from 1786 for West Highland and black cattle, or what later on were called Galloways, none were offered for Ayrshires till 1814, that is 21 years after the first show at Kilmarnock. In that year premiums were offered for both bulls and heifers in the Kyle or central district of Ayrshire. Kyle is the division of the county north of the Doon and south of the Irvine. On this occasion the 1st prize for bulls was awarded to Mr. Hendry, Highfield, and the 2nd prize to Mr. Morton, Brownhill. For heifers the 1st prize was awarded to William Pollock, Galston, and 2nd to Thomas MacLellan, Mauchline. On one or two occasions before this, the breed is referred to in private papers as the Ayrshire, but this seems to be the first public occasion on which it is so named, as the newspapers of that date all refer to it as the Ayrshire.

In 1816 the Society again offered premiums for Ayrshire bulls and heifers in the same district, when the 1st prize for bulls was awarded to James Tod, Langholm; 2nd to James Will, Tree, Elgin; and 3rd John Gibson, Craufordston. For heifers the 1st prize went to James Tod (apparently the same exhibitor as was awarded the 1st prize for bulls), while the 2nd went to Rev. Dr. Stirling of Craigie.

In 1821 premiums were again offered for Ayrshire bulls and heifers, but on this occasion they were extended so as to embrace both Cuninghame and Kyle, that is all the county north of the Doon. On this occasion the awards were as follows:—Bulls, 1st James Jack, Parktown; 2nd Robert Donald, Lintseedridge, Dalry. A daughter of the last-named exhibitor is still living in Kilbarchan, and another daughter was the mother of Robert Wilson, Manswraes, and formerly of Forehouse, Kilbarchan, also a noted breeder of Ayrshires. In the class for heifers, the first prize was awarded to James Wilson, Dykehead, and second to William Weir, Titwood.

In the years 1818, 1819, 1820, and 1821 the Highland Society offered premiums for Ayrshires in the Strathendrick district, which embraces the valley of the Endrick from Loch Lomond to the watershed between it and the Forth. At this time James, third Duke of Montrose, was closely associated with the work of the

Highland Society, and as he was a great admirer of the Ayrshire it is probable that it was mainly through his efforts that the breed were so largely introduced into that district, and very likely it would be owing to his influence that the premiums were given for them.

In 1822 the Highland Society gave premiums for Ayrshires in each of the three divisions of the county of Ayr, and in the following year these were extended to Strathendrick, the Upper and Middle Wards of Lanarkshire, besides the three divisions of Ayrshire. The first occasion on which premiums were given for cows was in this year in the Carrick district of Ayrshire, when the prizetaker was Willaim Henderson, Guiltreehill, a farm closely identified with the breeding of Ayrshires a generation later.

Prizes for cows were repeated the following year (1823) in the Upper and Middle Ward districts of Lanarkshire, when rather a noted name appears, viz., that of Samuel Peat, Browncastle, Strathaven, as the owner of the cow which was awarded the first prize. This Samuel Peat was an uncle of Mr. Hamilton, of Woolfords, and is the uncle referred to by him in his notes on the early history of the Ayrshire in the "Scottish Farmer" of 7th August, 1897. Mr. Peat was also a prizetaker the following year. About this time the H.A.S. gave a large proportion of their premiums to Ayrshire stock, as its good qualities seem to have impressed themselves not only on the country generally, but also on the directors.

AYRSHIRES AT THE SHOWS OF THE HIGHLAND AND AGRICULTURAL SOCIETY.

The Highland Society had been holding shows in Edinburgh in 1822, 1823, 1824, and 1825. These were, however, more of the nature of fat stock shows than of those for breeding animals, but it was decided that the show of 1826 (the year known as the dry summer, or the year of the short corn) should be held in Glasgow, and that the bulk of the classes should be for breeding animals. The magistrates of Glasgow signalled their approval of the visit by giving the Society a donation of £50, which the directors were authorised to distribute as they thought fit in extra prizes. The opportunity was taken to increase the classes for Ayrshires, which from this time forward included one and two-year-old heifers, and for the first time horse classes were also added.

Notwithstanding that there were no railways in the country at that date, breeders of Ayrshire stock all over the country entered their animals freely. The show was a great success, and the chief feature of it was the Ayrshires. In the class for cows there were 27 entries, the 1st prize going to Mr. Dennistoun, Golfhill; 2nd to Patrick Graham of Limekilns, East Kilbride; and third to John Robertson, Shetterflett, Beith; while Hugh Jack, Kilmaurs, was commended. In the class for bulls there were 22 entries, and all

the prizes went to Stirlingshire, the first and third going to the parish of Drymen. The Duke of Montrose was awarded first prize for a pair of Ayrshire oxen, which seem to have been of unusually large size, as they are reported as having been sold at £120. The one was 4½ years and the other 5½ years old.

In 1827 the Highland Show was held in Edinburgh, but no prizes were offered at it for Ayrshires. It however returned to Glasgow in 1828, when there was another great display of Ayrshires. The prize money amounted to £277, which was the largest sum yet offered by the Society. As in 1826 the entries for Ayrshires were numerous, there being 45 in the aged class for bulls, 21 in that for cows, 21 for yearling heifers, and for two-year-olds in lots of three there were no less than 16 entries.

The first Highland Show at Dumfries was in 1830, and on that occasion there were 6 bulls, 10 cows, and 6 queys. In the western district of Stirlingshire the Ayrshire had in great part displaced other breeds of cattle, and at the Highland Show at Stirling in 1833 there were 18 bulls and 11 cows of the Ayrshire breed.

The next occasion on which there was a great display of Ayrshires was in 1835, when the Highland Show was held for the first and only time at Ayr. The Ayrshire Agricultural Society dates its formation from this year, and as was to be expected the show was a very successful one, yet the Society has not returned to Ayr since then. Several new classes were introduced on this occasion. Previous to this date bulls of all ages had been exhibited in the one class, but at this show they were divided into two, those over three years and not exceeding six years and ten months, and the other for two-year-olds. In the aged class there were 16 entries principally from Ayrshire, the first prize in which went to John Baird, Highcross, Old Monkland. In the two-year-old class there were 19 entries, the first prize being awarded to John Gray, Tongue. James Allan, Blackstone, Dalry, was also a prize taker with a bull called Jock the Laird, of Swinlees breeding. In the cow class there were 13 entries, the first prize going to William Hunter, Montford, Ardrossan, grandfather of the present occupant of that farm. The second prize went to Lawrence Drew, father of Lawrence Drew, late of Merryton, who was then resident at Carmyle, near Cambuslang, Lanarkshire. A condition attached to the prizes for bulls at Ayr was that if £20 was subscribed they had to travel the district and serve cows within a radius of 30 miles.

Up to this date the H.A.S. shows in the west had been highly successful, and a return was made to Glasgow in 1838. At these shows the Ayrshires had hitherto been the principal feature, and this one exceeded any of its predecessors. There were no less than 255 Ayrshires exhibited, of which 79 were bulls and 148 cows. James Wilson, Renfrew, was the breeder of the first prize aged bull, but it was exhibited by Thomas Bowman, Hallhill, Lanark-

shire. In the two-year-old bull class Robert Logan, Mains, Kilbirnie, was first, and William Jamieson, Newhouse, Kilbirnie, second. Lawrence Drew, Carmyle, was first for cows, and also first for three cows, and second for three-year-olds. This show is well remembered in Ayrshire by the older members of the agricultural community as being the year before the Eglinton Tournament.

The next occasion on which Ayrshires appeared in any great number was at the H.A.S. show at Edinburgh in 1842, when James Horn, Newmill, Campsie; Robert Paton, Cloverhill, Glasgow; Patrick Graham, Limekilns; and Lawrence Drew were the principal prizetakers.

In 1844 the H.A.S. show again visited Glasgow, and as on previous occasions the Ayrshires were the great attraction of the show. On this occasion there were no fewer than 61 bulls entered, and in the class for three cows there were 19 entries. The first prize in the bull class was awarded to Robert Paton, and the famous animal painter, Gourlay Steell, was asked by the H.A.S. to paint a portrait of the bull for the hall of the Society. The breeder of this bull was Robert Hunter, St. Colmac, Bute, reference to whom is made in the paragraph relating to the introduction of the Ayrshire into Bute. The first prize of £2, for the best cow in milk, was awarded to Lawrence Drew, Carmyle, for his cow Nancy. This cow was bred by Adam Smith, Lintseedridge, Dalry. A painting of this cow was made for Mr. Drew by Howe of Edinburgh. At the sale of medals and trophies after the death of the late Mr. Drew, this painting was purchased by Alexander Cross of Knockdon, in whose possession it still is.

The H.A.S. show returned to Glasgow in 1850, and in the report on the show the following remarks are made *re* Ayrshire cattle:—“It is feared that the Ayrshire milking stock of late years have been bred to too light weights—a delicate appearance and a well set udder being the points most aimed at. . . . The paramount object to be held in view in breeding Ayrshires is obviously to obtain the largest quantity of good milk, with a tendency to fatten when put up to be fed, but neither of these ends will be obtained by light weights and delicacy of appearance.” For a number of years this tendency seemed to be carried too far by the judges of the day, and later on developed into the thimble-like teats and tight vessels which became such a craze in succeeding years. The taste for upturned horns had been growing of late, and from this date onward it rapidly increased. Prior to this the horns were generally incurved instead of upcurved, and were finer than those which were now in fashion. Undue weight has been attached to these points, and as breeders invariably attempt to produce what is fashionable for the time being, quite a different type of animal was gradually evolved from what had previously been common in the country.

A great International Show was held in Paris in 1855, at which 17 Ayrshire bulls and 51 cows were exhibited. The number of Ayrshires was greater than that of any other Scottish breed. The arrangements were all made by the H.A.S., and among the exhibitors was the late James Allan, Balnacool, Arran, who was accompanied by his younger brother Andrew, latterly of Munnock. While James had some stock of his own, part of his consignment belonged to his father, James Allan, Blackstone, Dalry.

THE DEVELOPMENT OF THE BREED DURING THE FIRST HALF OF THE 19TH CENTURY.

On several occasions during the past century, the various points of the Ayrshire aimed at by breeders have been minutely described. These clearly indicate how fashion and fancy have in time exercised their influence on the development of the breed. These influences were not always in the direction of improvement, and it is probable that no other breed of cattle has been so much altered as the Ayrshire in order to meet the views of the day.

In 1793, Fullarton, writing of the Ayrshire, says:—"The breed is short in the leg, finely shaped in the head and neck, with small horns, not wide, but tapering to the point. They are neither so thin coated as the Dutch, nor so thick and rough hided as the Lancashire cattle. They are deep in the body, but not so long nor so full and ample in the carcase and hind quarters, as some other kinds. . . . The farmers reckon that a cow yielding 20 quarts of milk per day during the summer season will produce cheese and butter worth about £6 per annum."

Shortly after Gilbert Burns read his paper at Kilmarnock in 1795, there was another discussion on "The particular form of cattle the Ayrshire farmer ought to select to breed from." The minute of the meeting gives a resumé of the discussion. It is as follows:—"Long and small in the snout, small horns, small neck, clean and light in the chops and dewlap, short legged, large in the hind quarters, straight and full in the back, broad above the kidneys and at the knuckle bones, broad and wide in the thigh, but not thick hipped, a thin soft skin of the fashionable colours, whatever these be, and the mother carrying her milk pretty high and well forward on the belly."

In the 1806 edition of Nasmyth's report on Clydesdale, the following is given as the description of the breed:—"The colour is mostly brown, with spots of white, the hair thick set, soft, and sleek; the head and neck lean and slender; the ears small and neat; the limbs short, small, and clean boned; the chest rather round than deep at the heart, the shoulders, and more especially the loins, broad and square, the back from the shoulder to the descent of the rump quite straight, the tail long and small. Some

aim at having cows without horns ; but when there are horns they are small at the root, not long, and pretty erect."

In the "Progress of Improvements in Ayrshire, more particularly in Cunninghame," printed at Irvine in 1829, by Geo. Robertson, the then factor for the Earl of Eglinton, there are several very pertinent remarks regarding the Ayrshire. Speaking of dairy stock he says :—"This forms the very pride of Ayrshire husbandry, more especially in Cunninghame. . . . It (that is the dairy stock) seems to me to be about the best, if not the most valuable of the milch cow kind in Britain. . . . The form of the Cunninghame cow is very elegant, but must be seen to be well understood. So far as it may be explained in words, it is thus :—The neck is small, the head little, the muzzle taper, the horns short, curved, and bending upwards ; the countenance mild ; the body straight along the back from shoulder to tail, the limbs slender, the udder shaped like a well turned punch bowl, and the paps widely set. The head, the neck, and the udder are the chief distinguishing points. The colour is generally brown of many hues, from dark to yellow, intermixed and mottled in many a varied form and proportion with white. Some few have a black ground, without any change in character, but almost none are of one colour only. In a whole hersel of forty or fifty, there will not two of them be alike in colour."

Another writer of about the same date, when describing the udder, says "it should be like a large soup plate." The old-fashioned punch bowl somewhat resembled a soup tureen of the present day, but instead of being oval it was generally round, so that the two illustrations very closely resemble each other.

Robertson's mention of the upturned horns is the first which seems to have been recorded, and it coincides with the influence exercised by the Swinlees herd, which was about its height shortly after this date.

At the general meeting of the Ayrshire Agricultural Association on 17th May, 1853, a committee was appointed "to fix the points of Ayrshire cattle, which shall be held of most importance as indicating superior quality." After careful enquiry and consideration, the committee report that in their opinion the following points should be attended to :—

Head short, forehead wide, nose fine between the muzzle and eyes, muzzle moderately large, eyes full and lively, horns wide set on, inclining upwards, and curving slightly inwards.

Neck long and straight from the head to the top of the shoulder, free from loose skin on the under side, fine at its junction with the head, muscles symmetrically enlarging towards the shoulders.

Shoulders thin at the top, brisket light, the whole fore-quarters thin in front, and gradually increasing in depth and width backwards.

Back short and straight, spine well defined, especially at the shoulders; the short ribs arched, the body deep at the flanks, and the milk veins well developed.

Pelvis long, broad, and straight; hook bones (ilium) wide apart, and not much overlaid with fat; thighs deep and broad; tail long and slender, and set on level with the back.

Milk vessel capacious, and extending well forward; hinder part broad and firmly attached to the body; the sole or under surface nearly level. The teats from two to two and a half inches in length, equal in thickness, and hanging perpendicularly; their distance apart at the sides should be equal to about one-third of the vessel, and across to about one half of the breadth.

Legs short, the bones fine, and the joints firm.

Skin soft and elastic, and covered with soft, close, woolly hair.

The colours preferred are brown, or brown and white, the colours being distinctly defined.

This is the first occasion on which shoulders thin at the top are mentioned. It is also the first time that the udder is referred to as the milk vessel, or what is known as the milk veins are mentioned, or that the under surface of the udder should be level. All previous references to the udder mention it as being more or less circular on the under side.

This is also the first occasion on which any reference is made to the length of the teats. There is no information regarding their previous length, but the inference is that it was greater than that stated here. This seems therefore to have been the beginning of the small teat craze which ultimately did so much harm to the breed, but which did not reach its maximum till between fifteen and twenty years later.

Writing in "The Upper Ward of Lanarkshire," Vol. III., p. 14, about 1865, Mr. D. Tweedie, Crawfordjohn, a noted prize-taker and breeder of Ayrshires, says, "The Ayrshire breed was moulded into its present form chiefly among tenant farmers, whose principal dependence lay in the produce of their dairies, and we cannot believe that merely fancy characteristics, as some suppose, had much sway with them. They have indeed produced an animal eminently graceful and well proportioned; but this beauty of form is the result of the combination of particular features, each of which has been sought for, and prized for as indications of some practical excellency. Thus the strong loins, the round barrel, the well carried milk vessel, are so many signs of durability and productiveness.

In its general features the Ayrshire cow is of a brown colour, with white spots, the hair thickset, soft, and sleek, the head and neck lean and slender, the ears small and neat, the limbs short, small, and clean boned, the chest rather round than deep at the heart, the shoulders, and especially the loins, broad and square; the

back from the shoulder to the descent of the rump quite straight, the tail long and small; milk vessel capacious and extending well forward; the sole or under side nearly level; the teats from 1 to 2½ inches in length, equal in thickness, and hanging perpendicularly. The weight of the animal, when fattened, should be about 40 imperial stones, sinking offal."

What will likely most surprise breeders of the present day, in the above description of the Ayrshire, is that the teats should be from 1 to 2½ inches in length. The committee of the Ayrshire Agricultural Association recommended 2 to 2½ inches twelve years before this, so that among exhibitors at this date, there was a widespread inclination to try and reduce the length. In this they succeeded wonderfully, clearly showing how much any breed may be modified in any detail in a very few years.

AYRSHIRE CATTLE HERD BOOK.

In 1877 the Ayrshire Cattle Herd Book was inaugurated, and since then a volume of entries has been published annually. When Volume XXXI. was issued in 1908 there were 19 life governors, 35 life members, and 311 annual members. The entries at the closing of this volume were 7239 bulls and 22,445 cows, besides a large number of partially qualified animals separately entered in an appendix. At two different dates the Council have published scales of points for the breed. For cows these scales were as follows:

Descriptions given in the Herd Book of 1884:—

	1884 Points.	1906 Points.
1. Head short, forehead wide, nose fine between the mussel and the eyes, muzzle large, eyes full and lively, horns wide set on, and inclining upwards	10	8
2. Neck moderately long and straight from the head to the top of the shoulder, free from loose skin on the under side, fine at its junction with the head, and enlarging symmetrically towards the shoulders	5	3
3. Forequarters—shoulders sloping, withers fine, chest sufficiently broad and deep to ensure constitution, brisket and whole forequarters light, the cow gradually increasing in depth and width backwards	5	11
4. Back short and straight, spine well defined, especially at the shoulders, short ribs arched, and the body deep at the flanks	10	13
Carry forward	40	35

	1884 Points.	1906 Points.
Brought forward	40	35
5. Hindquarters long, broad and straight; hook bones wide apart, and not overlaid with fat; thighs deep and broad; tail long, slender, and set on level with the back.	8	11
6. Udder capacious and not fleshy, hind part broad and firmly attached to body, the sole nearly level and extending well forward; milk veins about udder and abdomen well developed. The teats from 2 to 2½ inches in length, equal in thickness, the thickness being in proportion to the length, hanging perpendicularly; their distance apart at the sides should be equal to about one-third of the length of the vessel, and across to about one-half of the breadth	Udder Teats 33	20 12
	Mammary gland	5
7. Legs short in proportion to size, the bones fine and joints firm	3	—
	Escutcheon	1
8. Skin soft and elastic, and covered with soft, close, woolly hair	5	6
9. Colour, red of any shade, brown, or white, or a mixture of these, each colour being distinctly defined. Brindle or black and white is not in favour	3	2
10. Average live weight, in full milk, about 10½ cwt.	8	4
11. General appearance, including style and movement	10	4
	—	—
Perfection	100	100

The ideal length of teat is stated in the scale of points for 1906 as from 2½ to 3½ inches, and the live weight as from 800 lb. to 1000 lb. at maturity. It will be noticed that the scale of points of 1906 differs materially from that of 1884. This is especially the case with regard to the length of the teat, which is now wanted one inch longer than was considered sufficient from 1853 to some time after 1884. The live weight is now given as from 1½ to 2½ cwt. less than previously. This does not mean that the average size of the Ayrshire is decreasing, for in 1884 only a small proportion of animals were 10½ cwt., but the weight now stated is the ideal. It has also the merit of being much nearer the average than formerly.

The late William Bartlemore, secretary of the Renfrewshire Agricultural Society, was not only a noted owner but judge of Ayrshires, particularly of bulls. In 1889 he delivered a lecture to the Glasgow and West of Scotland Discussion Society, on the

Ayrshire cow, in which he said—"It cannot be said that the scale of points formulated by that Society (Ayrshire Herd Book) is fully in consonance with the views of intelligent fanciers of the breed. That scale was adopted by those alone who had been following the showyard specimens of the breed—specimens which may all very well be perfection in themselves, but which experience has now demonstrated are in no way suited to the present commercial age. Where Ayrshire cattle show-followers erred was in promoting a fashion of breeding for teats no bigger than a thimble, and neglecting the yielding capabilities of the cow. Provided an animal showed perfection in these points, it mattered little how she milked, and many first prize animals were really inferior for dairy purposes." These are weighty words of Mr. Bartlemore's, and it showed great courage for one who was himself an exhibitor to go thus in the teeth, as it were, of what was fashionable at the time. The small teat of the Ayrshire during the last half of last century has done more outside of the south-west of Scotland to discredit the Ayrshire than all its other faults put together. Mr. Bartlemore thought the small teat craze was passing away in 1889, as by that date exhibitors and breeders had begun to realise that when these animals were passed through the auction ring, they sold for very much less than others of a similar size and quality with longer teats. While the small teat craze was probably at its maximum 20 years before Mr. Bartlemore made these remarks, and was somewhat modified by the date they were made, still progress was extremely slow, more especially among showyard specimens, and it is probable that more progress has been made since 1900 than during the previous thirty or forty years. The influence which foreign and colonial buyers have exercised on the size of the teat has been considerable, for although the small teats of the Ayrshire materially hindered the spread of the breed outside the south-west of Scotland, they almost strangled the foreign trade. In their native home cows with small teats can be milked fairly satisfactory, because there the bulk of the milking is done by women, but in other districts or countries where the work is done by men whose hands are larger than those of women, they simply will not be tolerated.

The bulk of this paper has been devoted to an attempt to throw light on the origin and early history of the breed in this country, and as far as old writings permitted, to describe what it was like. The points allocated to each part of the cow by the Ayrshire Cattle Herd Book in 1884 and in 1906 to some extent describe the breed as we know it at the present day, but the characteristics so well explained by the late William Bartlemore in 1889 as his ideal then, may be repeated now as being equally applicable twenty years afterwards. They cannot be much improved on yet, and are therefore reproduced here.

“The Ayrshire cow of the present day is a fully medium-sized beast, with wide upstanding horns, and body somewhat wedge shaped. What breeders have universally aimed at in order to ensure the highest milking qualities, is to produce an animal with body light before and heavy behind, with capacious, well-balanced udder. One main point, the calving bones should not be wide. Animals of that class neither milk nor fatten well. As regards the colour it is much a matter of fancy. The prevailing one is flecked brown and white, but there are many splendid specimens all brown, while the leading showyard colour during the last ten years has been white, with brown or dark brown sides of head. Few dairies in Scotland of any size at the present day are without their flecked black and white Ayrshire, and strange to say, that colour is much in demand by gentlemen who keep a few cows for family use. In any view, whatever is the colour, should be well defined. One of the main characteristics of the Ayrshire cow is her extreme hardiness, her ability to exist and thrive in exposed situations on scanty fare, and give a good milk yield. While such is the case, however, she responds gratefully to more genial circumstances. Experience has shown that when taken to sunny climes she does as well as on her native pastures, and even better than any of the local breeds of cattle, provided always she gets plenty of good water to drink, and is not pampered with too much good food, and receives that gentle treatment to which she is accustomed to in the land of her birth. Wherever brought up, the Ayrshire should be kept well during the early part of its existence, so as to get bone and muscle, build up a healthy constitution, and beget beef. Unless one and two-year-old heifers are well treated, they will never become properly developed and remunerative to their owners. With a liberal diet at the outset, Ayrshires are sure to prove profitable, and add to their reputation in whatever part of the world chance may place them.”

The above statement very clearly indicates the opinions of a keen and successful exhibitor, and universally recognised judge at that date. The same winter in which the above was written, another exhibitor and breeder, giving a public lecture on “Shows and Showing,” thus refers to a question regarding Ayrshires, which had received some attention at that date, but has been more discussed since then.

“We find one man year after year exhibiting very successfully yeld stock, while with cows he is nowhere to be found; and we find another man with milk stock always to the front, while his yeld are never seen. Now there is something wrong in all this, and herein lies one of the reasons why in the showyard Ayrshire cattle do not, as a rule, command respect amongst other exhibitors.”

The gentleman quoted belongs to a family who have for several generations been largely associated with the development of the

Ayrshire, and with the exportation of them during the greater part of last century. When a breeder and exhibitor gives expression to such opinions after mature and careful consideration of the subject, they should not be lightly set aside, and more particularly when they coincide with opinions which are given expression to daily by broadminded admirers of the breed everywhere.

THE HARDINESS OF THE AYRSHIRE.

The hardiness of the breed is proverbial, and its ability to adapt itself to changed conditions of food, climate, soil, and surroundings is marvellous. This characteristic is probably akin to Darwin's expression "the survival of the fittest," as in the districts where many of our Ayrshires are bred, not a few of them are subjected to conditions of climate and food supply which have no resemblance to pampering. The principal rearing districts are those where the milk is largely devoted to cheesemaking, but of late years there has been a well-defined tendency to breed in localities where the milk is utilised in some other way, and where breeding had been more or less abandoned in recent years. In the cheesemaking districts the bulk of the cows calve between February and May, and as a rule the calves are fed on little but fresh milk until they are sufficiently old to be put out to pasture. When this happens the milk as a rule is reduced in quantity, or to a greater or less extent is substituted by whey, to which linseed or other food has been added. As the season advances and the grass becomes more plentiful the hand feeding is gradually reduced, till at midsummer little or nothing is given. The first winter they are usually in the house during the night and out during the day, and the following winter much the same course is followed, although where open sheds or plantations are available, they are occasionally in the open the most of the winter. The majority have their first calf when three years old, but some of the stronger ones are usually timed to calf when two and a half years old, and even a few at two years old.

MILK RECORDS.

From the attention which had been given for many years in breeding from Ayrshires which were comparatively perfect in body, without paying an equal regard to the milk producing capabilities of the animals, it seemed to the directors of the Highland and Agricultural Society that the dairying capabilities of the breed ran some risk of being overlooked. Early in 1903 they offered to pay a large part of the expense of weighing the milk and estimating the fat in it, of the herds in any district where local societies might be formed, for doing so every fourteen or other number of days. This work they carried on for five years, and in that period a record was

kept of the following number of herds and cows, the details of which are recorded in the Societies' Transactions.

Year.	Number of Societies.	Number of herds tested.	Number of cows tested.	Interval in days between each visit.	Length in weeks over which the testing extended.
1903	3	36	1342	14	26
1904	1	12	389	14	30
1905	2	30	815	14 to 21	34 to 52
1906	5	76	2688	14 to 28	26 to 52
1907	7	109	3931	14 to 21	26 to 52

As the value of this class of work began to be realised by breeders of Ayrshire cattle, its volume increased to such an extent that in 1907 it was thought desirable that its control should be transferred from the directorate of the Highland and Agricultural Society to some committee more intimately connected with the work. It was ultimately resolved that this new body should be called the Ayrshire Cattle Milk Records Committee, and that it should be composed as follows :—

- 5 members from the Ayrshire Cattle Herd Book Society.
- 2 members from the Highland and Agricultural Society.
- 1 member from each of the Milk Record Societies.

For the year 1908 the Highland and Agricultural Society placed £200 at the disposal of the Committee to assist in carrying on the work for which it had been constituted.