

KINCARDINE IN MONTEITH.

PRESBYTERY OF DUNBLANE, SYNOD OF PERTH AND STIRLING.

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I.—TOPOGRAPHY AND NATURAL HISTORY.

Name and Boundaries.—IN the county of Perth there are the castle of Kincardine in Strathearn, the town of Kincardine in the parish of Tulliallan, and the parish of Kincardine in Monteith. This name is of Gaelic origin, and is said by the author of the former Statistical Account of this parish, to mean *the head of the shore*. This countenances the opinion generally entertained, that the carse in the vicinity of the church and manse, and which forms a very important part of the parish, was, at a remote period, a continuation of the Frith of Forth. But some who are skilled in Celtic lore say, that Kincardine being a Scoto-Celtic word, and occurring in the north, where the Britanno-Celtic or Welsh does not appear to have ever been spoken, must be derived from *Cinn-chairdin*; and that, as the first part of this word means literally heads, it may be rendered heads of friends: or applied metaphorically, it may mean the rallying place of friends, referring either to the chief who ruled, or to his stronghold where his retainers found friendship and protection in times of danger.

This locality favours this interpretation, because, adjoining the old church and manse, and where the minister lately had his garden, there was a foss or moat, and what were vulgarly called the *Auld Wa's*, being the remains of an old castle. There is besides, at a short distance westward, a commanding point called the *Ward*, and a tumulus about an equal distance eastward, of considerable elevation, both of which are supposed to have been watch-towers. The author of the Account of the parish of Kincardine in Ross-shire adopts this latter etymology, and says that the chief of

the clan Ross, and his most powerful and confidential friends, dwelt there, and gave the name Kincardine to the place where they resided.

This parish is of a triangular form, and is divided on the south and east from the parishes of St Ninians, Gargunnock, and Kippen, by the Forth; and by the Teith, on the north, from Lecropt and Kilmadock. From the confluence of these streams to the south-west extremity of the parish along the Forth, the extent is about ten miles; and from the same point to the north-west extremity on the Teith, twelve miles. The western boundary measures about seven miles from north to south. A part of the parish of Kilmadock, about 3 miles in breadth, and extending from the Teith to the Forth, intersects this parish; but there is a *quoad sacra* church at Norriestoun, in the western part of Kincardine, which accommodates such of the people of Kincardine, Port, and Kilmadock, as live at an inconvenient distance from their parish churches.

Extent.—The eastern part of Kincardine is about $2\frac{1}{2}$ miles from Stirling. The parish contains about 6000 Scotch, or about 7500 imperial acres; about 5000 acres of which, extending along the Forth, are carse, and 2500 along the Teith, are dryfield land.

Topographical Appearances.—The only elevated part of this parish is a gradually sloping ridge, which commences at the mansion-house of Blair-Drummond, and ascends westward by gentle undulations, from about 40 to 300 feet above the level of the sea, at the highest part of the road, from Thornhill to Callander. The soil along this ridge is, with few exceptions, of good quality, and slopes laterally to the Teith on the north, and to the carse on the south. There is nothing very remarkable along this line, except the varied and interesting scenery which the higher points command. The view to the west and north comprehends a portion of the Grampian mountains, such as the cloud-capped Benlomond, Benvenue, and Benledi; and also Benvoirlich, Stuckachrone, and Uamvar. On the east, the range of the Ochils, including Dumyat, the Sheriffmuir, the Abbey Craig, the Castle of Stirling, the Gillies Hill, the field of Bannockburn, and the rock of Craigforth, all crowd in rich variety upon the sight, and recal many historical recollections. But, even beyond all these, the line of the Frith of Forth is seen extending eastward as far as the eye can reach. On the south, the view is bounded by the

Lennox hills, which run with little interruption from the Castle of Stirling, on the Forth, to the Castle of Dumbarton, on the Clyde, the principal portion of these hills being seen from this parish.

The intermediate district of Monteith, to which the description refers, is from this point very interesting. Here are the extremes of cultivation and sterility. To the west lies Moss Flanders, with its thousands of uncultivated acres; in the centre and eastern portions of the Strath are seen the fruits of agricultural intelligence, enterprise, and success; and the more elevated situations in the west, north, south, and east, are adorned with the mansion-houses and ornamented parks of the different proprietors, and the comfortable houses of their tenantry. This grand and beautiful variety of objects is seen from this parish, because it forms, as it were, a centre, of which they are the circumference.

Soil and Climate.—The carse portion of this parish is completely flat, and includes the moss of Kincardine, and a part of Moss Flanders. The soil of the small carse, where it has been cleared of moss, is generally of a rich blue clay, of great depth, and very productive, capable of bearing all kinds of grain and green crops.

The dryfield rises from the carse into a gently swelling ridge, which generally slopes to the south, except at the north-western extremity of the parish, where the slope is to the north and south. This ridge joins the picturesque hills in the parishes of Port and Callander. The soil is a light loam, and produces excellent oats, barley, potatoes, turnips, and grass. The subsoil is generally tilly or rocky.

Meteorology.—There is a considerable difference in the temperature of the atmosphere in the higher and lower divisions of this parish. The south-eastern division is about 20, and the north-western about 300 feet above the level of the sea. In the latter, the air is comparatively cold, and the vegetation later and more uncertain; while in the former, the atmosphere is mild, the heat greater, and the land also being better, the crops are earlier, more abundant, and of better quality. But in consequence of the length and breadth of the carse, in which the currents of air meet with no interruption for many miles, the high winds, especially when the mountains are covered with snow, are

peculiarly cold and penetrating. The following abridged table, from an account of the state of the atmosphere, regularly kept at Deanston Works in this neighbourhood, gives a correct view of the monthly state of the thermometer, barometer, and hygrometer in this parish :

1839.	Barometer.			Thermometer.			Rain in Inches.
	Lowest.	Highest.	Mean.	Lowest.	Highest.	Mean.	
January,	27.90	30.60	29.78	17	48	35.00	5.35
February,	29.17	30.25	28.74	24	47	37.00	4.50
March,	29.30	30.28	28.92	31	48	38.25	3.40
April,	29.24	30.75	30.17	34	54	44.50	1.20
May,	29.47	30.38	30.07	48	60	51.60	1.40
June,	29.32	30.28	29.95	50	68	58.02	1.95
July,	29.35	30.49	29.86	54	68	68.55	0.50
August,	29.33	30.39	29.05	52	65	58.45	3.40
September,	29.00	30.09	29.54	44	59	54.07	5.60
October,	29.77	30.99	30.24	35	55	45.22	3.85
November,	29.17	30.22	29.72	22	51	42.53	2.15
December,	28.85	30.60	28.95	18	47	36.51	2.40
	29.15	30.44	29.58	35	55	47.47	35.20

1840.	Barometer.			Thermometer.			Rain in Inches.
	Lowest.	Highest.	Mean.	Lowest.	Highest.	Mean.	
January,	28.50	30.43	29.61	16	46	37.42	6.00
February,	28.70	30.75	29.93	26	47	37.48	1.85
March,	29.81	30.80	30.46	33	49	40.83	0.00
April,	29.12	30.50	30.46	40	59	49.16	0.00
May,	29.40	30.50	30.01	40	60	50.80	1.40
June,	29.40	30.22	29.96	68	50	58.17	3.30
July,	29.55	30.25	29.89	51	64	56.93	0.90
August,	29.12	30.42	30.00	48	66	59.57	1.60
September,	29.10	30.16	29.74	45	60	51.80	4.60
October,	29.12	30.65	30.04	30	54	45.10	2.00
November,	28.86	30.56	29.63	32	50	40.73	3.00
December,	29.15	30.89	29.31	24	46	35.10	1.30
	29.14	30.51	29.92	38	54	46.92	26.

The polar lights and luminous meteors are often seen here in beautiful variety and grandeur.

At stated seasons this parish is visited by easterly haars, which, towards the evenings in the months of spring and autumn, come up the Forth. These haars consist of a cold, dense, moist vapour, which fills the valley of the Forth, extending to the elevated lands on each side of it. Their chilling effects are injurious to the field labourer, whose constitution may have been much excited by the heat and hard labour of the earlier parts of the day, and in delicate constitutions produce colds, and affect the lungs.

The summits of our mountains, by the vapours, and the clouds resting upon them, give indications at all seasons of a change in the atmosphere; and in the evenings of spring and autumn the vapour rising for miles along the line of the Forth gives sure proofs of frost. The reflexion from the clouds also, of the great furnaces at the Devon, the Carron, and other great works, indicate the moist state of the atmosphere for a considerable time before the rain visits us. The prevailing winds are from the west and south-west, but the coldest are from the north and east. The two ranges of hills which enclose this level country meet in the Grampians, to the west, where their elevation is so great as powerfully to attract the clouds which come sweeping along, sometimes on the north side, and sometimes on the south side of the valley.

The climate here is of a mild and medium character, and promotes the health of the inhabitants, and renders the soil productive. The reason is, that the carse division is wide, open, well cultivated, and fertile, and but slightly raised above the level of the sea, and the dryfield is also in a good state of cultivation, and slopes generally to the south.

Hydrography.—There are no lakes or friths in this parish, but there is, especially in the dryfield, plenty of water produced by numerous springs, which are pure and copious. Some of them contain a portion of iron, and some of lime which appears in very hard incrustations in the process of boiling. For this reason the water is hard, and less profitable for washing and bleaching. Throughout the parish, but especially near the line which divides the carse from the dryfield, these springs appear in great numbers. They gave an abundant supply, with a few exceptions, even during the long continued droughts of 1826 and 1842. But where there are no surface springs, abundance of water is to be found by sinking wells to a moderate depth, especially on reaching or cutting through the sandstone.

The proprietor of Blair Drummond estate has, for the benefit of his tenants, sunk some wells in the carse, from which the moss has been removed, and has found abundance of water. There is, in the western division of the carse, a copious supply from two natural streams, which flow through it from the higher grounds into the Forth. But as there are no springs along the banks of the Forth, some of the farmers there have, by force-pumps, raised water from that river, and filtered it for the use of their families.

and cattle. Mr Home Drummond has lately, and at his own expense, brought a supply of excellent spring water by pipes into Thornhill, which has been a valuable boon to the inhabitants of that village.

The principal small streams or burns which flow through this parish are the Mill of Muck, and the Burnbank burns, which have been employed in driving mills and floating moss into the Forth. There are also the burns of Cessintully and Little Mill, in the western division of the parish, which have been employed for the same purposes.

The principal rivers which water this parish are the Forth, the Teith, and the Goodie.

The Forth, the Boderia of Ptolemy, and Bodotria of Tacitus, is the southern boundary of this parish. Near its source it has two branches, the one in Stirlingshire, which comes from a spring on the north side, and near the summit of Benlomond, and is considered to be the proper source of the river; the other, which issues from Lochard and Lochcon in Perthshire, has its source westward of Lochcon. These two branches meet at Aberfoyle in Perthshire, where they are called the Avendhu, or Black River; and at Gartmore House, five miles below this junction, they receive and retain the name of the Forth.

The course of this river from Benlomond to Stirling may be about 35 miles. The upper part of the Forth is narrow and shallow; but in its progress it deepens from three to seven feet, and when it passes from the dryfield into the carse, its breadth and depth are greatly increased, by receiving the contents of many tributary streams. In its progress, for fifteen miles, the channel is sometimes rocky, and sometimes gravelly, and its water is clear and pleasant to the taste; but, on entering the flat, mossy, and clayey district, it is discoloured, not merely by the nature of the soil, but also, during a great part of the year, by the moss which is floated into it, and by other agricultural improvements.

This appearance of the river is increased by the influx of the Goodie, which joins the Forth about nine miles above Stirling, after running through part of this parish. It issues from the lake of Monteith, in the parish of Port; and at a short distance from the lake it enters Moss Flanders, and, like the Forth, flows slowly in a channel so deep as to be seen only by those who approach its banks.

At a remote period, and before the vale of Monteith was so much improved as it is now, by draining, and the receding of the waters, this river, with its beautiful source, was called the Lake of the Guidi, or Guddie, because, by its level course, and many windings and interruptions, it formed, especially in the rainy seasons, a complete morass.

The Teith is of a different character from the Forth and Goodie. The name Teith is supposed to be derived from Teth or Te, signifying *hot*, and is said to have received its name from its rapid progress, in the higher parts of the river, over a channel consisting of innumerable round stones and pebbles, which, from the beautiful clearness of its waters reflecting the sun's rays, give it a sparkling prismatic appearance. Flowing eastward from Lochs Katrine, Achray, and Vennachar, on the south side, and from Loch Lubnaig, on the north side of Benledi, (its two branches meeting above Callander,) it may well be called "Daughter" not "of three," but of "four mighty lakes." It bounds Kincardine parish on the north, (a portion of Kilmadock intervening,) from about four miles below Callander, to its junction with the Forth at the extremity of this parish, about two and a-half miles west of Stirling. Its gravelly channel, and the lakes at its sources, operating as so many filters, give a beautiful clearness and freshness to its waters. Although it loses its name by its junction with the impure and sluggish Forth, yet it sends one-half more water into the Frith of Forth than that river does. Its length from Callander to this junction is about thirteen miles; and, except where pools occur, some of which are very deep, it is shallow; and its breadth is generally contracted by its firm and rocky banks. After much rain, or the melting of deep snow, when the mountain streams pour their contents into it, its rise is sudden, and, overflowing its banks in various places, it sweeps irresistibly before it every moveable object within its reach. Its velocity is increased by a uniform fall from Callander to its junction with the Forth of about 200 feet. Were it not out of place here, we might dwell on the natural grandeur and beauties of this river, with its adjacent scenery, such as the elegant mansion-houses, tastefully ornamented parks, thriving plantations, and agricultural improvements which adorn the course of the Teith; but this would be superfluous, because the immortal Sir Walter Scott, in his *Lady of the Lake*, has celebrated in song this part of Perthshire.

Geology and Mineralogy.—The north division of this parish is composed of various soils, resting on sandstone of the transition series. The south side consists of clay, resting on the same rock and stretching along the north bank of the Forth. The greater part of this division was, till lately, covered by moss. The clay is rich and deep, and good for agricultural purposes.

In the banks of the Forth and Goodie numerous beds of oyster, muscle, cockle, and other marine shells appear at various depths between the surface of the clay and the channels of the rivers.

The discovery of these marine remains and others which have been found in the neighbouring parishes, furnishes an increasing proof, that the sea extended over the level part of this parish at the period of the deposition of the clay.

The transition from the Carse to the dryfield is abrupt, and frequently as well defined as are the banks of a river. The dryfield has an increasing elevation northward. In the vicinity of Blair-Drummond, the soil in the first part of the rising ground is a light loam, having in general a gentle slope, but in some places an abrupt face to the south, and extending about a mile in breadth. It is well adapted to the growth of trees and shrubs, and is beautifully wooded and tastefully adorned by walks and shrubberies,—forming part of the pleasure-grounds of Blair-Drummond.

The sandstone which has been formerly mentioned, and vulgarly called gray freestone, has been considered as the old red sandstone of the transition series. It has been used for various purposes, the best kind being a good stone for building. In the moor of Ballochneck, and for several miles to the west of it, the colour is of a light gray or smoke colour, and of a hard consistency, and valuable for flags and buildings. There is a remarkable instance of the first kind at Ochtertyre, where it rises above the clay in a detached circular eminence, which is covered with trees and brushwood. The prevailing dip of the strata, as appears from the various quarries which have been wrought, is towards the north-west, and in general at a slight inclination. Veins of calcareous spar are often met with in quarrying, and occasionally barytes.

No organic remains of any kind occur in the sandstone, except a few vegetable impressions.

In the soil of many of the higher parts of the parish, boulders

of various species of rocks have been found in great abundance, and removed for draining the fields, making roads, and building fences. In the latter, many specimens have been preserved of granite, gneiss, mica and common slate, conglomerate, sandstone, and grit, and of various kinds of trap rock. The mica slate is frequently studded with garnets of a coarse quality.

Zoology.—Roe deer are frequently found, and, occasionally, red deer in the young plantations in the higher parts of the parish; and the former frequently visit the woods of the level country. Foxes, polecats, stoats, weasels, and hedgehogs, are numerous, but less so of late years, in consequence of the constant and successful exertions of the gamekeepers in the district. Otters frequent the banks of the Teith, Forth, and Goodie. They have been traced by their foot-prints in the snow to their hiding-places; and on one occasion, four were killed at one place by terriers of sufficient strength and courage. They are very destructive to the salmon and other kinds of fish.

The badger used to be seen, but has now disappeared. The black rat of Scotland, which till lately abounded in this parish, has also disappeared, but has been succeeded by great numbers of the brown rat, which are very destructive to the farm-houses, barn-yards, and hen-roosts of the farmers. Although the common squirrel was unknown in this parish till about twenty years ago, yet it now abounds in almost all our plantations. Hares, rabbits, common and ring-necked pheasants, and partridges, are very numerous. Pheasants were not seen here till about twenty-five years ago, but since that time the common kinds have multiplied greatly, and the white kind occasionally appear in the plantations. The curlew was formerly plentiful, and is still to be seen; and the woodcock is an annual visitor. Snipes are now scarce, in consequence of draining and other improvements. Black and red grouse used to be numerous, but are now seldom seen, and in small numbers, since the moss of Blair-Drummond has been improved. For the same reason, adders are more seldom seen.

Various birds of prey belong to this district, or frequently resort to it, such as the kestrel (*Falco tinnunculus*), the sparrow-hawk (*Accipiter fringillarius*), and the merlin (*Falco aesalon*.) These are the most common, but there are also frequently seen here the peregrine falcon (*Falco peregrinus*), the common buzzard (*Buteo vulgaris*), and the hen-harrier (*Circus cyaneus*),

The kite (*Milvus Ictinus*) is rarely seen so far from the lakes and mountains to the north and west; but the long-eared owl (*Otis auritus*), the common ivy or brown owl (*Strix Aluco*), and the barn owl (*Strix flammea*), are common. Rooks are very numerous, in consequence of there being large rookeries on the estates in the neighbourhood, especially at Ochtertyre and Blair-Drummond. The hooded-crow (*Corvus cornix*), the jay (*C. glaudarius*), and also the jackdaw and magpie, are natives. A white crow was lately shot in this neighbourhood; and a magpie, almost white, was entrapped by the gamekeeper at Blair-Drummond. Both have been preserved.

This parish is periodically visited by the landrail (*Crex strepera*), by the bat, the goatsucker (*Caprimulgus Europæus*), by starlings, and a few golden plovers. We have also the fieldfare, redwing, and missel-thrush, the two former of these remaining till the middle of March or beginning of April (the missel-thrush remaining permanently,) when they migrate to Norway or Sweden, and are succeeded by the common thrush, after it has been some months absent.

As the following list of smaller birds contains generally the different species of those which visit this parish periodically or are permanent, it may perhaps with propriety be admitted into this Account, especially as many of the more common kinds are purposely omitted:

<i>Certhia familiaris</i>	<i>Silvia salicaria</i>	<i>Parus ater</i>
<i>Muscicapa grisola</i>	<i>Regulus cristatus</i>	—— caudatus
<i>Silvia phoenicurus</i>	<i>Saxicola œnanthe</i>	<i>Pyrrhula vulgaris</i>
—— cinerea	—— rubicola	<i>Fringilla montium</i>
—— trochilus	—— rubetra	—— linaria
—— hypoleais	<i>Anthus pratensis</i>	—— spinus
—— sibilatrix	—— arboreus	—— carduelis
—— atricapilla	<i>Parus palustris</i>	

The crossbill (*Loxia curvirostra*) is rarely seen here, but a great number appeared during the winter of 1838, especially at Lanrick Castle, and after continuing some months in the plantations of spruce firs, on the seeds of which they feed, they disappeared in the spring. During their stay, however, specimens of the male and female were shot and are carefully preserved.

The common sandpiper (*Tringa hypoleucus*), and the water ouzel and dipper, (*Cinclus aquaticus*) frequent our rivers; and the king-fisher (*Alcedo ispida*) also is occasionally seen, displaying his brilliant plumage as he skims swiftly along the streams, or perches watchfully on the twigs which overhang his favourite fishing pools. The varieties of water-fowl are very limited. Seagulls of differ-

ent kinds and in considerable numbers come up the Forth into the interior, fifteen or twenty miles above the flow of the tide, at different seasons of the year, but chiefly in spring, when they cover in great numbers the newly ploughed fields, and devour worms, &c. They come also to escape from the storms which sweep the Frith; and to nestle in the islands, and on the shores of the lakes to the westward.

The wild swan does not remain here; but is often seen in winter, passing from one favourite haunt to another among the surrounding hills and lakes.

Wild ducks are very numerous along the streams of the Teith and Forth, but especially on an ornamental piece of water in Blair-Drummond park. Here they are allowed to hatch and rear their young in safety; and so securely do they occupy this peaceful retreat, that one may pass within a short distance of a great number of them, especially in the months of October and November, without disturbing them. There is an island in the middle of this sheet of water, bearing trees of various kinds about fifty years old. Among the reeds and rushes which skirt this island, and on the island itself, coots and water-rails build their nests, and rear their young; and here the majestic swan, in imperial dignity, is lord of the isle and the waters.

The trees are the abode in spring, summer, and harvest of the sombre heron, whose ponderous nests, containing a noisy and voracious brood, weigh down the more elevated branches of the trees. The cry of the heron and her brood is very peculiar, and has been alleged to have led to a superstitious belief in Scotland, in the existence of a being called the Water Kelpie. The jackdaw and the heron nestle in the same trees, and the wily little daw not unfrequently usurps the heron's nest, and seems even to watch for some of the young heron's food. The breeding season appears to reconcile some kinds of the feathered tribe to each other; and in this retired and peaceful spot, where the rays of the mid-day sun are powerful, but where no storm can enter, there live together in apparent harmony, the heron and the daw, the coot, the rail, the wild duck and the swan; with hares, pheasants, partridges, and pea-fowl, rejoicing in undisturbed peace on the margin of the water; while the venerable grove of mighty oaks which overlooks the scene, sends forth the varied music of a thousand happy inhabitants.

Salmon have always been found in the river Teith; and although

formerly they were more abundant, yet the floods in spring, summer, and autumn, still encourage considerable numbers of excellent salmon, weighing from 6 to 25 lbs., and grilse from 5 to 7 or 8 lbs., to frequent the river. A considerable improvement has recently taken place by the protection given to the smoults during the months of May and June, when they descend in shoals to the sea.

Common and sea-trout are plentiful, and a few perch and pike are occasionally to be found. There are two species of eels, the lamprey and common eel, and parr, minnow, loach, and stickle-back are numerous.

Very few salmon resort to the Forth on account of the impure and mossy nature of its waters; but pike, perch, and large eels are abundant. Common trout are rarely seen in the lower parts of the Forth, but higher up they are numerous and excellent, and in the Goodie, one of its tributaries, which issues from the loch of Monteith, the fine red trout which inhabits that loch is to be found.

The muscle that produces pearls (*Mya Margaritifera*) is common in the Teith, and the size and value of the pearls have occasionally been considerable; but they are not found in such numbers as to remunerate the search.

The families of insects in this parish are numerous, varied, and beautiful, but do not in general differ from those that are to be found in all the district. It would, however, be an omission, not to mention a beautiful specimen of the death's-head moth, which was found on one of the south windows of the church of Kincardine in 1834, and is preserved, the body measuring $2\frac{1}{2}$ inches long, 2 inches in circumference at the insertion of the wings, and $1\frac{1}{2}$ inch at the middle; the wings being $\frac{5}{8}$ ths of an inch broad, and 4 inches from tip to tip when moderately extended. The figure of the death's-head, which gives the name to the insect, is half an inch long, and very distinctly marked. The down of the insect is perfectly beautiful. It emitted, when caught, a shrill sound resembling that of a mouse or bat. It did not verify the common superstition, by preceding the cholera in this district.

It may also be proper to mention the glow-worm here, which the writer has found in a warm sheltered locality near the manse. This beautiful visitant, however, is but seldom seen here.

Botany.—The woods and plantations of this parish are com-

posed chiefly of oak, ash, beech, elm, birch, and fir. The soil is well adapted to the growth of all of these; but oak, beech, and fir predominate.

In the park at Blair-Drummond there are many fine trees chiefly beech and oak, which are probably not surpassed by any others of the same age. Great attention has been paid to thinning and preserving them from injury, and on this account no animal but sheep is admitted to the pasture, so that each kind of tree is allowed to display the peculiar beauty of its form and mode of growth, and to extend its branches near the ground.

One beech, in January 1835, measured in circumference at the smallest part of the bole, between the swell of the roots and the swell of the branches, 15 feet 1 inch. Another measured in the same way was 14 feet. Another, at 4 feet 8 inches from the ground, is 13 feet, and many others at 3 feet or $3\frac{1}{2}$ feet from the ground from 13 feet 6 inches to 11 feet. An oak at $3\frac{1}{2}$ feet from the ground is 12 feet 8 inches, and many others at the same height from 9 to 11 feet.

It will be observed, that these measurements refer to the perpendicular height above the ground, and are taken somewhat higher than is usual, at what is considered the fairest point of comparison for the dimensions of trees.

The trees above-mentioned were not, in 1835, more than 120 years old, and probably some years younger.

In December 1839, a larch, which grows in sand in the south bank of what is called the Sand Hill, measured at 2 feet perpendicular from the ground, quite free of the swell of the roots, 9 feet 10 inches. Another larch, cut at the same date, measured at above a foot from the ground, free of the swell of the roots, 9 feet 2 inches, having 49 rings of wood, of which 36 were red wood. There are also five larches above 100 years old, which have risen to a great height by being planted among the other trees, one of which measures, at $3\frac{1}{2}$ feet from the ground, 8 feet 11 inches. From former measurements, these last-mentioned larches do not seem to have gained above four or five inches in the last ten years, while some of the beeches and oaks have added above a foot to their circumference.

There are several birches of a much later date from $9\frac{1}{2}$ to $10\frac{1}{2}$ feet, and also some old Scotch firs measuring from 8 feet 5 inches to 10 feet. The seed from which a plantation of Scotch firs, along the side of the turnpike road near Blair-Drummond,

was raised was procured by Lord Kames from old trees at Auchenbowie in Stirlingshire. A great number of them have sprung up in the moss on the opposite side of the road, and formed a new plantation, being self-sown from the cones, which crows have been observed carrying to the open moss for the purpose of feeding on the seed. "The timber of this species is much superior to that of the other two kinds which are frequently cultivated, one of which has a short and thin foliage, and produces but little timber, and the other, although it is of rapid growth, produces timber of an inferior quality." (*Journal of Agriculture*, October 1843.)

The ash and plane (sycamore) trees at Burnbank are much older than the trees at Blair-Drummond. Some of them exceed 11 feet in circumference, and there is a walnut tree there 11 feet 7 inches at 3 feet from the ground.

Walnuts usually ripen, chestnuts not so often, though not long ago they ripened three years consecutively, and as many plants as were wanted were raised from seed.

On the estate of Ochertyre, belonging to David Dundas, Esq. M.P., there are some trees remarkable for their age and size, and of which the following deserve particular notice.

An ash near the house, called the jug-tree, from the jugs having been fixed in it, was measured in 1800 by the late Mr Ramsay, and, at about two feet from the ground, was 11 feet in circumference, the branches extending 38 feet from side to side. The circumference of the same tree in 1838, at two feet from the ground, was 13 feet 8 inches.

In 1838, the following measurements of other trees of various kinds were taken at the height of two feet from the ground: Several oaks, seventy years old, were from 8 feet 8 inches to 8 feet 11 inches in circumference. One large lime, ninety-eight years old, 10 feet 5 inches; a beech, 10 feet 7 inches; a poplar, 12 feet; another, 10 feet 7 inches; a larch, seventy years old in 1838, growing near the river, measured 7 feet 7 inches, and others growing near it from 7 feet 7 inches to 9 feet 5 inches. Two others, on the bank of the river, 10 feet; one elm, 10 feet; and several Scotch firs from 6 feet 8 inches to 6 feet 10 inches. These trees grow chiefly in a gravelly or sandy soil.

In the neighbourhood of the manse and other situations in this parish, some of the commoner plants, as they appear in succession, are remarkable for their profusion and elegance. The woods are literally clothed in April with the white flowers of the anemone

(*Anemone nemorosa*), and in May with the graceful clusters of the blue hyacinth (*Hyacinthus non-scriptus*), to which the white earth-nut (*Bunium flexuosum*), and a profusion of other plants succeed. The red campion (*Lychnis dioica*), and the blue geranium (*Geranium pratense*), grow in similar abundance on a part of the bank of the Teith, which has been nearly insulated by a lead cut from the river. And in this situation, and in the mosses, some of the rarer plants are found, which are mentioned in the subjoined catalogue, kindly furnished by Mr James Drummond, the intelligent gardener at Blair-Drummond.

Growing in the Mosses.

Pedicularis palustris	Drosera longifolia	Narthecium ossifragum
Andromeda polifolia	Hydrocotyle vulgaris	Erica tetralix, v. alba
Myrica gale	Triglochin palustre	Calluna vulgaris, v. alba
Vaccinium oxycoccos	Lycopodium Selago	Alisma plantago
———— myrtillus	Polygala vulgaris, 3 var.	Comarum palustre
Drosera rotundifolia	Empetrum nigrum	

Gramineous plants in the Mosses.

Eriophorum vaginatum	Alopecurus geniculatus	Holcus mollis
———— polystachion	Agrostis vulgaris	Carex vulpina, &c.
Scirpus palustris	———— canina	Juncus effusus, &c.
Nardus stricta	———— stolonifera	
Poa fluitans	Holcus lanatus	

Growing by the river Teith.

Linum catharticum	Hypericum humifusum	Trollius Europæus
Adoxa moschatellina	———— perforatum	Circæa lutetiana
Allium ursinum	———— pulchrum	Melampyrum sylvaticum
Anthyllis vulneraria	Alchemilla vulgaris	Saxifraga granulata
Meum athamanticum	Campanula latifolia	Stellaria nemorum
Chrysplenium oppositifolium	———— rotundifolia v. alba	———— holostea

Gramineous plants by the river Teith.

Aira flexuosa	Phalaris arundinacea	Melica uniflora
———— caryophyllea	Triticum repens	Luzula maxima
Poa aquatica	Briza media	

Growing in the Woods.

Convallaria majalis	Habenaria bifolia	Orchis Morio
Pyrola rotundifolia	Listera ovata	———— maculata
———— minor	Epipactis latifolia	Hyacinthus non-scriptus

Growing in the Marshes, Lochs, and Ponds.

Parnassia palustris	Potamogeton natans	Typha latifolia
Pinguicula vulgaris	Nuphar lutea	Lobelia dortmanna
Menyanthes trifoliata	Nymphaea alba	

Growing in Hedges.

Solanum Dulcamara.

II.—CIVIL HISTORY.

There are no accounts, ancient or modern, of this parish, except the last Statistical Account by Mr Tait; but the following short notices may be worthy of a place here, on account of their ancient dates and connection with this parish.

From the chartulary of Cambuskenneth, at the time that Hugo was chancellor betwixt 1190 and 1200, and by whom the follow-

ing deed was signed, it appears that William the Lion granted to the Abbey of Cambuskenneth the church of Kincardine, as under, "Ecclesiam de Kincardin cum capellis decimis et oblationibus omnimodis et tredecem aeris terrae arabilis, et unum toftum brasiatoris cum uno orto, et unum toftum ad campanam sancti Lolani cum uno orto, et unum toftum ad baculum sancti Lolani cum uno orto."

It also appears that "the lands of Guddie were, by James II., on the 1st of June 1452, given to Robert Norrie for bringing the tidings of the birth of Prince James, afterwards James III." Scots-tarvet's Calendars in the Harleian Library.

Eminent Characters, &c.—The Muschets long held high rank in this parish and district. They were descended from the Earls of Montfort, who were the Dukes of Bretagne.

The Duchess of John de Montfort was daughter to the Earl of Flanders, and her daughter Ann, was married first to Charles VIII. and thereafter to Lewis XII., kings of France.

The Muschets, originally called Montefichett or Montfichet, and De Montefixo, are said to have come from France into England with King William the Conqueror, and in King Edgar's reign, to have come from England into Scotland with that king's sister, who was married to Malcolm III.

The above particulars are taken from a manuscript in the possession of Dr Muschet of Birkhill, near Stirling, who is the lineal descendant of the Muschets, and, it is said, their only representative in this district.

For the following statements in reference to this ancient family, the writer is indebted to H. Home Drummond, Esq.

"In the churchyard, over the door of a burial-place at the east end of the ground where the old church stood, there is a shield of arms, consisting of two cheverons, Gules, on a field ermine, with a pigeon for crest, and the motto, "I thank my God." Above the shield is the date 1686, and below it this inscription: "Sepultura antiquissimae Mushetorum familiae a Gulielmo de Montefixo, qui hic floruit circa annum m.c.c.c. progenitae." Sir David Lindsay in his "Register of Armes," gives the same shield as the bearings of "Muschet of Kincarne," with the difference of an additional cheveron charged with a star. There were various branches of this ancient family, who were proprietors of many estates in this part of the country, and in this parish in particular, there were Muschets of Burnbank, Culgarth, Miln of

Torr, Miln of Goodie, Cuthil, &c. A few years ago, in repairing the mill of Torr, a stone, on which there had been a coat of arms, was found, which had probably been placed in the wall of the proprietor's house, when the Muschets had a residence there. The shield is unfortunately defaced, but the motto "I thank my God," and the date "1598," are distinct.

There is a tombstone of this family in the orchard of Burnbank, and near where the house of the Muschets once stood. It bears the following inscription:

"Here lyes the corpes of Margaret Drummond, third daughter to the Laird [of Invermay,] and [Spouse to] Sir George Muschet of Burnbanke: Her age 26: Departed this life in the wisitation, with her three children at Burnbanke, the 10 of August 1647."

In confirmation of the English origin of the family, the coincidence of the arms of the ancient name of Montfichet in English heraldry may be noticed. "Montfichet, Lord of Stansted, Montfichet Essex, Gules three chevrons or, with a label of three points azure," v. Arms of the Barons of England added to the supplement to Heylin's History.

The author of remarks on Ragman Roll, p. 42, (v. Appendix to Nisbet's Heraldry,) after mentioning "Richard Muschet" as one of those who swore fealty to Edward I., adds, "This is a very ancient family, designed in Latin De Montefixo, and were Barons of Cargil in Perthshire. Sir William de Montefixo was Justiciarius Scotiae in 1332. By his daughter and heiress the estates of Cargil and Stobhall came to Sir John Drummond, one of the ancestors of the noble family of Perth. Muschet of Burnbank was the heir-male, but lately decayed, though severals in Monteith are of them, as the Mushets of Craighead, Cailziehat, Mill of Torr, and Mill of Goody."

An exemplified copy is preserved in the Perth charter-chest of a very old charter, by which William the Lion grants "Richardo Mountfecht" the lands of "Kergill et praeterea Kincardin, juxta Strivelyn, cum socca et sacca, cum furca et fossa, cum thal et them, et infanganthef," to be held in free barony for the service of one knight.

An eminence about a quarter of a mile from the house of Blair Drummond, known by the name of the Gallow Hill, was probably the place of execution under this jurisdiction.

The residence of the "Muschetts of Kincarne," according to

tradition, was a castle in the immediate vicinity of the church-yard, the old walls of which were mentioned above, and were visible in some places not many years ago.

George Drummond of Blair, in 1684, acquired by purchase from the Earl of Perth the lands of Drip, Cambusdrennie, and others in this parish, being part of the ancient "Barronnie of Kincardin in Monteith, which came to the house of Drummond by the Lady Mary Montefix."* These lands were, at the same time, erected, in favour of the said George Drummond, into a free barony, to be called the barony of Blair-Drummond, from his own name, and that of his paternal estate of Blair, in the Stormont.† But it was not till 1714 that he obtained from the Earl of Perth the conveyance of the other parts of the barony of Kincardine on which the house of Blair-Drummond is built. The building was commenced soon afterwards; and before that time there was no family residence in the vicinity, nor a tree planted, except the few that were usually raised, according to the custom of the times, in the turf dikes that surrounded the small corn-yards of the tenants."

There is an inscription in elegant Latin on a shield in the church of Kincardine, in memory of this George Drummond; and there are also other separate inscriptions to the memory of several of his descendants. His grand-daughter, Agatha Drummond, the Lady of Lord Kames, succeeded to the estate of Blair-Drummond. Lord Kames died in December 1782, and his lady in June 1795. There is a monument over their tomb in this church-yard, bearing an inscription, which is also in the church, and which was composed by Dr Hugh Blair, and is particularly noticed by Lord Woodhouselee in the second edition of the *Life of Lord Kames*.

In the church there is also a very appropriate inscription to the memory of George Home Drummond, Esq., (the only son of Lord Kames,) whose lady was the sister of Sir Henry Jardine. The estate has descended to Henry Home Drummond, Esq., their eldest son, who lately represented the county of Stirling in the British Parliament, and who is at present the Member and the Vice-Lieutenant of the county of Perth.

* *Genealogie of the House of Drummond*, 4to, Edin. 1831, p. 111.

† The first of the name who was designed "of Blair" was George Drummond, who, with his youngest son, William, was waylaid and slain by the Lairds of Gormock, Drumlochie, Ardblair, and others, in 1554. (V. Appendix to the "Genealogie.") He was son to John of Ledcreese, and grandson to Walter of Ledcreese, who was uncle to John, first Lord Drummond.

In referring to eminent characters who belonged to this parish, the late Lord Kames deserves to be particularly mentioned. As a philosopher, an author on various subjects, a lawyer, and a judge, and a zealous supporter of every patriotic undertaking and useful improvement, his name is above all praise. There is a painting of his Lordship in his robes of office as a judge in the drawing-room at Blair-Drummond. There are also several original portraits there by Sir Godfrey Kneller, particularly one of the Lord Chancellor Perth, and one of his brother, the Earl of Melfort.

In the church there is an inscription in Latin to the memory of the late John Ramsay, Esq. of Ochtertyre, which was composed by himself some time before his death. He was related to the family of Dundas of Manor, near Stirling, and studied as a lawyer at the University of Edinburgh, but did not follow the law as a profession. He was very indulgent to his tenants, was a kind friend, an intelligent country gentleman, and was highly esteemed by all classes of the community. He composed several epitaphs in Latin, of which the one in the church is a good specimen. He died in March 1814. His name appears in Dr Currie's edition of our poet Burns's works, as one of the correspondents of the poet, who was a visitor at Ochtertyre.

Land-owners.—The following is a list of the heritors of this parish, being twenty-one in number, showing their respective valuations :

	Valued rent, Scots.
H. Home Drummond, M. P.,	L. 9218 0 10½
David Dundas, M. P.,	448 18 4
Colonel Graham,	322 16 8
C. A. Moir,	225 17 0
Andrew Jardine,	188 6 8
J. M'Queen,	64 0 0
Dunblane Presbytery,	54 10 11
A. Watson,	50 0 8½
Earl of Moray,	39 18 4
J. Kinross,	37 0 0
W. Mackisson,	34 6 8
J. Paterson,	30 0 0
T. Sommers,	25 18 4
J. Doig,	21 0 0
A. Sym,	20 18 4
J. M'Laren,	19 10 0
P. Doig,	17 8 4
R. Downie,	9 0 0
W. Reid and J. Morison,	4 10 0
Mrs Sommers,	6 5 0
J. Duncanson,	1 16 0
Total,	L. 4783 17 0

The heritors have, at much expense and with great success, cultivated their estates, by adopting the most recent improvements in

agriculture and the rearing of stock. They have made this parish, compared with what it was formerly, very productive.

Parochial Registers.—The books of discipline in this parish, which are not voluminous, dated from 1695 to 1734, in the handwriting of Mr Matthew Wallace, who was the minister of the parish, contain a minute account of the parochial collections and disbursements. These old manuscripts are at present in the possession of Mr Home Drummond. The book of discipline has been regularly kept to the present time.

There is also a register of births regularly kept by the session-clerk. The registry of baptisms commenced in 1691, and that of marriages in 1692, and have been distinctly kept.

Antiquities.—Some interesting vestiges of antiquity belong to this parish.

When the Doune approach to Blair-Drummond was made, several stone coffins, containing urns and bones of the human body, were found, which are noticed in the "Transactions of the Antiquarian Society of Edinburgh," Vol. iii. p. 42. Each coffin consisted of a box of stone rudely formed, and half the length of the human body.

A portion of the skeleton of a whale was found some years ago about a quarter of a mile from the manse, imbedded in the clay, which had formerly been covered with moss, and lying on another stratum of moss below the clay. An account of it is to be found in the Transactions of the Wernerian Society. It is very remarkable that a small piece of deer's horn, with a hole bored in it, was found along with this skeleton, of exactly the same description as a piece of horn which Mr Bald mentions as found with the skeleton of the Airthrey whale, now in the Edinburgh College Museum. The skeleton of the whale found here is also deposited in the same museum.

There is a very well-defined tumulus within the garden of Blair-Drummond, of a conical shape, and of considerable dimensions, which has never been opened, measuring 92 yards in circumference, and about 15 feet in height; and there is one of larger dimensions within the pleasure-grounds, on a bank overlooking the carse, which was probably a watch-tower or signal-point, as there is no intervening object between it and Borrowstownness. It is 150 yards in circumference, 15 yards in height, and 40 yards from the bottom of the bank. There is a tumulus near Blair-Drummond east Lodge, in which, on being opened, some fragments of urns

and human bones were found. It is surrounded by a circular foss, from which it has been formed, and is vulgarly called Wallace's Trench. It is 63 yards in circumference, and 5 feet in height from the bottom of the fosse. The history of Sir William Wallace brings him, after having burned the Peel (a stronghold) of Gargunnoch, across the Forth to this very point, by a road which led across the moss of Kincardine to a ford in the Teith, where, in the ordinary state of the river, it is fordable.

In addition to these antiquities, we may take notice of a large stone which stands on the summit of the Borland Hill, at a short distance and in a north direction from the first-mentioned tumuli. It is 5 feet in height above the ground, and 12 in circumference, but more flat than round, and of a conical form near the top. It is apparently in a natural state, bearing no marks of the hammer or the chisel, and is a very large boulder of slate. A very vague tradition represents it as having been a place of religious worship in superstitious times. There are no other remains near it to confirm this opinion; but whether it be correct or not, it is evident that its site is a very important one, and may have been useful as a signal station, as it commands a view, not only of the road across the moss of Kincardine already referred to, but also of the line of the Roman stations along the Forth and Teith in the direction of the camp at Ardoch.

In the operation of removing the moss, several specimens of antiquities were found between 1770 and 1840. One of the most remarkable of these is a large brass camp kettle, of a circular form, of the shape of a common boiler, which was found upon the estate of John Ramsay, Esq. of Ochertyre in 1768, and presented by him to the Antiquarian Society of Edinburgh. For an account of it, see the Farmers' Magazine, 4th August 1817.

A similar vessel was found at a much later date in a similar situation, which is preserved at Blair-Drummond. Antiquarians are of opinion that they are Roman camp kettles. Several spear-heads of brass have also been found from time to time in the mosses of Blair-Drummond and Meiklewood, which are in the possession of the proprietors.

A considerable number of a remarkable kind of stone has been found upon the clay, under a thick bed of moss, some of them composed of slate, and others of a compact stone of a greenish colour. They are from four to six inches long, of a flat shape, well polished, some being wedge-shaped at one end, and some at

both, and others having a hole through the thick end. They are by some supposed to have been used for skinning animals, and are apparently too short for the purpose of removing bark from the trees, for the purpose of tanning leather.

Some of the moss tenants found small heaps of embers or charred timber on the surface of the clay below the moss.

The late John Ramsay, Esq. of Ochtertyre, who was a zealous antiquarian, had a pair of jugs which were fixed in a large and very old ash tree near his house, at about five feet from the ground. The jugs consisted of a piece of iron to be fastened in a wall or tree with an iron collar which enclosed the neck, and which was secured by a padlock, for the punishment of culprits. There was a ring or hook on the outside of the old church, to which, it is understood, jugs had been formerly fastened.

When the walls of the old manse here were taken down, the die of the communion tokens was found in a recess above the front door, bearing the impression "X. P. 1699," within a square on the die, bounded by double waving lines.

There are no ancient roads in this parish, except the one found by the moss improvers, which is universally ascribed to the Romans. Seventy yards of it in length were discovered on the surface of the clay, at the bottom of the moss, after the peat, to the depth of eight feet, had been removed. It was formed of trees about twelve inches in diameter, having other trees of half this size crossing them, and brushwood covering the whole. This road crossed the moss of Kincardine northward from a narrow part of the Forth, towards the Roman road, passing between the moss and the river Teith. This last-mentioned road has been traced from a ford in the Teith, about four miles north-west of the Drip, in a south-east direction, by Torwood and Larbert, to Camelon, on the Roman wall. It is supposed to have been made by the Romans for checking the incursions of the Caledonians by the Pass of Leny, and also for opening a communication by Dunblane with the well known station at Ardoch. A part of this road, near the mansion-house of Ochtertyre, is still called Staniegates, from the stones of which it was formed, there having been no moss there to require a foundation of trees.

The stone coffins already mentioned were found on this line in Blair-Drummond Park. By pursuing this line along the Forth and Teith, the Romans had not only the advantage of the more open country, but also of having their right protected by these rivers.

Modern Buildings.—The mansion-house of Blair-Drummond

The yearly average of births for the last seven years preceding 1881 was 56
 marriages for do. 23

No register of deaths is kept.

The average number of persons under 15 years of age included in the census of 1821 was 877

The average from 15 to 30 years of age, 658

30 to 50, 449

50 to 70, 316

upwards of 70 88

There is only one resident proprietor of independent fortune.

The number of proprietors of land of the yearly value of L.50 and upwards is 17

The number of families in 1831 was 510

Average number of children in each family in 1831, was 4.83

The number of inhabited houses in 1831 was 470

uninhabited houses, 14

houses building, 2

There are two insane females in this parish, two females deaf and dumb, and one blind man.

Language, &c. of the People.—A mixture of the Scotch and English language is spoken by the original inhabitants of this parish, and Gaelic and English by the moss population who settled here from the commencement of the moss improvement. The Gaelic language has fallen so much into disuse during that time that few or none can profit by a sermon from the pulpit in that language.

The habits, dress, and food of the parishioners are similar to those of the agricultural population of Scotland in general. It may be observed, however, that there has been a marked improvement generally since the last Statistical Account, in their habits of cleanliness, style of dress, and mode of living, arising from their being more independent in their circumstances. They are a sober, industrious, contented, enterprising, and successful people, and generally unexceptionable in their moral and religious character.

IV.—INDUSTRY.

The number of farmers, cottars, and farm-servants, exclusive of the moss, is 110, and the number of such labourers in the moss, 110.

There are 20 artisans, by whom about 30 subordinates are employed. There are six superannuated male labourers in this parish, two of them diseased both in mind and body. There are also two females of the latter description.

Although the able-bodied portion of the population are employed in field labour, yet such as are confined to their houses, during the winter season, are employed in thrashing grain, feed-

ing cattle, and keeping in order every thing connected with their farming establishments. The females in particular are occupied in needle work, knitting stockings, spinning flax and wool, making coarse kinds of dresses for themselves and their families; in carrying eggs, fowls, butter, and cheese to the market; and in bringing in return things necessary for domestic use. The system of small wheel spinning and hand-loom weaving, which used to prevail in this parish, as well as in the other parts of Scotland, has been superseded by machinery in the cotton and woollen manufactories.

Much time is spent during a great portion of the year in carting peats and produce to various places. The sale of peats was formerly carried on by all the moss people, and engaged much of their time and attention, and was found to be so profitable that in some years individuals have been known to realize from it as much as L.40 Sterling.

Agriculture.—There are about 6560 acres in this parish which are cultivated. There are 142 acres of moor which are unfit for agricultural purposes, but would be profitable if they were planted; and there are 470 acres of moss, a great part of which will soon be removed by floating, or by making it into peats, and the subsoil, consisting of a superior quality of clay, brought into cultivation. There is no common remaining but about 10 or 12 acres in the vicinity of Thornhill, open and unenclosed, as liable to certain servitudes. There are on the estate of Blair Drummond, about 500 acres in permanent pasture, and ornamented with trees, and about 300 acres of woods.

In the pleasure grounds at Ochtertyre there are about 24 acres of fine old trees. And on a part of the moss there are about 24 acres of a young plantation.

The trees which appear to be indigenous to this parish are, the oak, common and mountain ash, Scotch fir, elm, alder, birch, plane, beech, and various kinds of willow. The spruce, larch, and silver fir, and others of the fir kind, as also the walnut, and Spanish and horse chestnut have been at different periods successfully introduced. The Spanish chestnut grows rapidly and to a great size, and its timber when matured is considered as next to the oak in value.

The management of the woods in this parish with regard to regular thinning, periodical felling, pruning, and the like, has been very judicious.

Rent of Land.—The average rent of carse land per acre has been about L. 2, 7s., and of the dryfield, about L. 1, 7s. The average rent for grazing an ox or a cow is from L. 3 to L. 4 per annum. This is not a sheep grazing parish.

Rate of Wages.—The rate of labour during summer and winter, for the different kinds of farm-labourers and country artisans, is from 2s. to 3s. per day; of masons, carpenters, and other country mechanics, from 2s. 6d. to 3s. 6d. per day. The yearly wages of ploughmen are from L. 14 to L. 18, and of women employed as farm-servants from L. 5 to L. 8.

Live-Stock.—The horses in this parish are of a medium size, altogether fitted for agricultural purposes; but as the labour of the carse farms requires a more powerful horse than that of the dryfield, a larger size is reared for this purpose by a cross between the hardy race of the western district of Perthshire, and the Clydesdale horse. Of late years, much taste and skill have been shown by the farmers in selecting at the neighbouring markets horses of strength and symmetry, by which means the breed has been much improved.

The cow common to the Highlands of Perthshire till of late years prevailed; but for dairy purposes the Ayrshire breed has been generally reared, and has been found profitable to the farmer for milk, butter, and the market. A cross of one remove between the Ayrshire cow and the short-horned bull, has by some farmers been lately introduced for the purpose of increasing the size of the stock, as well as for dairy purposes, but the practice has been too limited to warrant any general conclusion.

A five years' system of rotation is generally followed by the farmers in the dryfield, and a six years' rotation by those in the carse, and during this rotation marked attention is paid to the draining, cleaning, liming, and manuring of the land, which has greatly increased the return of every kind of produce, both in quantity and quality.

Kincardine Moss.—It may be proper to take some notice here of the history of the moss of Kincardine. In showing the recent improvements of the parish, this becomes in some degree unavoidable, and the utility is obvious, because these interesting topics are more satisfactory and useful when condensed in a Statistical Account, than when in detached statements in various publications. The reader may see a good account of this moss and its improvements in the Farmer's Magazine for August 1817, containing a plan

of the moss and a drawing of the large wheel, and also in the *Encyclopædia Britannica*, Vol xii. and in the appendix to the former *Statistical Account*.

The man who renders waste land productive increases the resources and prosperity of his country. This remark applies to some of the enterprising proprietors of this parish, and in particular to the proprietor of the Blair Drummond estate.

In the moss of Kincardine there were above 1800 acres of moss, including nearly 1500 on the estate of Blair Drummond. This moss was very deep, resting on a subsoil of rich clay, which consists of strata of a gray, reddish, and blue colour, of the same quality as those of the level country along the Forth from Stirling to Falkirk, and which are called carses. The sea at one time must have covered the country where the moss of Kincardine was, and must have been the cause of this accumulation of clay. On the receding of the sea and the subsiding of the waters of the Forth, the Teith and the Goodie, by the formation of deeper channels, this rich flat district was soon covered with oak, birch, alder, and hazel, and even with a few firs, some of the oaks being of a very great size, indicating a great age. These trees have been found as numerous under the moss as they can be supposed to have grown in their natural state, and the roots and heath have been found fixed in the clay. The trees and roots thus found correspond in dimensions.

In "an Account of the Peat Mosses of Kincardine and Flanders in Perthshire," by the Rev. Christopher Tait, formerly minister of this parish, read before the Royal Society of Edinburgh in 1793, and printed in the 3d volume of the *Transactions*, it is stated, that "Forty large oak trees were lately found lying by their roots, and as close to one another as they can be supposed to have grown,—one of these oaks measures 50 feet in length, and more than 3 feet in diameter, and 314 circles or years' growths were counted in one of the roots. In another part of the moss, an oak was found that measured 4 feet in diameter, and I am assured that some years ago, a root was discovered at Ross, on the south side of the moss, that was 15 feet in diameter at the surface of the clay; and the tree, which was 22 feet in length, was 4 feet 8 inches in diameter at the lower end, where it had been cut over, at the height of a yard from the ground."

In 1823, an oak of the following dimensions was found in Blair Drummond moss: Length of bole 41 feet, circumference at the surface of the ground 16 feet, and at the top 9 feet. One branch

18 feet in length, measured 5 feet 4 inches in circumference. The solid contents of this tree were 361 feet 1 inch. As there was only a part of the trunk found, the height of the original stem must have been about 60 feet. In Blair Drummond House, there are some beautiful pieces of furniture, which were made of an oak of great size, which was dug out of the bank and bed of the Forth in 1826.

These trees cannot have died naturally, otherwise the roots could not have retained their strength and consistency so long. Nor can they have fallen before a hurricane, otherwise they would have broken at various heights from the ground, or been torn up by the roots, which has not been the case, as they are cut about two and a-half feet from the ground, being the part where the tree is easiest cut, and where the greatest strength of the person cutting can be applied. The general opinion is, that they were cut down by the Romans, as the marks of the size of a Roman axe have been seen on some of them. As the roots and trunks are found together they must have been cut, not for the value of the timber, but for clearing the plains and dislodging the natives. This is confirmed by history, because from the time of Agricola, the Roman soldiers and the provinciated Britons were employed to cut down the woods or make openings in them, and to make roads through the marshes for the passage of their armies. In proof of this, various Roman antiquities have been found upon the clay under the moss, to which reference has been formerly made. Thus we find that they attempted to secure the northern frontier of the province, by cutting down part of the extensive forests which covered the level country along the banks of the Forth and Teith, and by establishing a regular chain of posts in the direction of Kincardine moss, the pass of Leny, and the station at Ardoch, where the forests formerly stood.

Tacitus mentions the chain of posts between the Forth and Clyde as the work of Agricola in his fourth campaign, which coincides with the year 81 of our era. About fifty years thereafter the wall of Antoninus was built nearly in the same line. From these references, therefore, the age of the moss of Kincardine must be about 1760 years.

In 1766, Lord Kames having become connected with the estate of Blair-Drummond, by the succession of his lady, applied his intelligent and comprehensive mind to the improvement of this moss, and, during his lifetime, was pretty successful, but still the

want of sufficient water-power made the process very slow. He was successful, however, in showing the practicability of the plan of floating which he had adopted.

In the year 1783, his son, George Home Drummond, Esq., succeeded him. At this time, by the genius and perseverance of Mr George Meikle of Alloa, the son of the inventor of the thrashing machine, a water-wheel was invented for raising a large supply of water for floating the moss. It was lined with buckets round the whole inner circumference, made about four revolutions in a minute, and in that time raised from forty to sixty hogsheads of water. This it discharged into a cistern connected with it, seventeen feet above the surface of the stream which supplied the wheel with water and turned the whole. From the cistern, the water flowed partly in pipes and partly in an open canal about 1754 yards in length into the reservoirs in the moss.

The water-power being thus procured, the floating by means of spade labour became comparatively easy, and the Forth served as a recipient for carrying the moss into the Frith. By the end of October 1787, the wheel, pipes, and aqueduct were all finished, and the result realized the most sanguine expectations of all parties. The total expense exceeded L.1000. The tenants voluntarily engaged to pay the interest of the money so expended, but the proprietor generously relieved them from this engagement.

During the time of the great wheel, occasional and expensive repairs were necessary. Its labours commenced in 1787, and ended in 1839. At the time of the erection of the wheel from 1200 to 1300 acres were still to be cleared of Mr Drummond's moss, and a great number of settlers were required for this purpose. These were procured chiefly from the parishes of Callander, Balquhiddy, and Killin. The population in this moss soon increased to from 800 to 1000, and the colony increased in prosperity, until they became in many instances so independent in their circumstances, as to become farmers on a larger scale. When a new line of turnpike road was made along the north side of the moss, giving them easier access to and from the mills and markets, so grateful were they to the proprietor, who had at great expense encouraged this road, that they made him a voluntary offer of one hundred guineas for its advantages to themselves, which offer he generously declined.

By the system of improvement which was then adopted, and which has been in operation since that time, nearly the whole of

the Kincardine moss on the estate of Blair-Drummond has been reclaimed.

The subsoil on which the moss rested, consists of very productive clay, and carries good crops of wheat, oats, barley, hay, turnips, potatoes, and pasture. It is well known, however, that, for some years after the moss is removed, the new land does not produce profitable crops of wheat, beans, and barley, nor even of green crops. To prepare it for these crops, the roots and stocks of the trees must be removed, the ridges made straight and level, the water from the clouds skilfully disposed of by draining, the soil exposed by the plough to the action of light, air, and moisture, and enriched by lime and manure.

By following this system these crops in the carse are even more abundant now than in the dryfield, and in all respects equally good in quality.

The moss improvement on this estate has in all respects been completely successful, in reference to the return to the landlord and tenant, and in its advantages to the community.

In thus adding to his estate, the proprietor has certainly been at great expense, in cutting canals, erecting the great wheel, making roads and sinking wells, dividing the water among his different tenants, and in keeping the whole in repair; but the success which has attended his operations in this and his other agricultural improvements on his estate, for the mutual benefit of himself, his tenants, and the public, must have afforded him very great pleasure. He has now the satisfaction of seeing, instead of the stagnant waters and the deceitful quagmires of the moss, the presence, prosperity, and happiness of hundreds of his fellow-creatures. Mr Drummond's predecessors were considered as romantic when this plan of improvement by floating was devised, and measures adopted for its execution; and the very people whom they employed were regarded with more than indifference by many, as a dangerous class, and as likely to become a burden to the parish and the district. But who does not now admire the foresight of Lord Kames, and the bold enterprise and liberal expenditure of his son and his grandson in this great improvement? The result of this wisdom is seen in the many happy families on the estate, in the many thousand additional bolls of produce which these tenants carry annually to the market, and in the great amount of wholesome food which they thus provide for the public.

In addition to the moss of Kincardine, Mr Drummond acquired

by purchase, some years ago, 280 acres of moss below Thornhill. There is no stream here, the level of the Goodie being too low, nor a water-wheel to carry away the moss from the spades of the workmen; but reservoirs are made in the higher moss, called Moss Flanders, for receiving rain water, and from these, by sluices, the operation of floating is carried on. Although the moss here is very deep, and the labour and expense great, yet, of the 280 acres, 170 have been cleared; and the remainder diminishes daily.

On a part of this moss, and higher up the Goodie, about 75 acres have been cleared by the same system, by Messrs Sim, Doig, Paterson, and their predecessors, who are still very industrious and successful in thus adding to the extent of their farms.

The trees found below this moss are of the same character as those found in Kincardine, consisting chiefly of large oak, and lying on the clay with their tops towards the east. It is the general opinion, that no moss nor forest existed between this moss and that of Kincardine; and, on the supposition that the trees were cut down by human labour, this is the position in which they would naturally be laid, because the space to the east of the original forest being open, the first cut trees would be made to fall in that direction.

In addition to these improvements in this parish, it is gratifying to refer to a most important one by Colonel Graham of Meiklewood, for an account of which see the Quarterly Journal of Agriculture, and the Prize Essays of the Highland Society of Scotland for March 1832, from which the substance of the two following paragraphs is taken.

Colonel, then Major, Graham had 130 acres of good clay land in this parish covered by moss to the depth of ten feet. He had no water power of sufficient elevation near this moss; but, as it was near the Forth, and running parallel to it, he adopted the plan not hitherto employed of raising water from the Forth by a steam-engine, for carrying the moss into that river by means of spade labour. He erected an engine of ten horse power, which, by means of pipes, forced as much water into a cistern at the engine-house, and from that into a large reservoir in the moss, as kept 25 men constantly employed. This was allowed to flow as usual by a sluice from one side of the reservoir, in the direction of the portion of land which was to be cleared, and the 25 men, with their spades, were skilfully and actively employed in loading the

stream with moss as it returned to the Forth, near the point whence it had been raised.

The engine raised the water at the rate of five tons per minute to the height of 38 feet from the surface of the river to the reservoir at the top of the moss, conveying it in long wooden pipes to the distance of 400 yards. The operation began in May 1828, and the ground was all bearing a crop in 1832. There was paid to the contractor for clearing 100 acres, averaging ten feet deep, L. 2095; for coals, L. 816; wages of engine and furnace man, L. 223, 4s.; tallow, oil, leather, &c., L. 156. In all for clearing 100 acres, L. 3290, 4s.

The ardour, liberality, and perseverance of Colonel Graham in this operation excited the attention and the unqualified praise of the whole proprietors and farmers of this district. But, as will appear hereafter, he is also entitled to the highest praise for other improvements.

Another system of moss improvement has been resorted to on the estate of David Dundas, Esq. of Ochtertyre, M. P. for Sutherlandshire.

When, at the death of Mr Ramsay, the family of the late James Dundas, Esq., succeeded to this estate, there were about 243 acres of it under moss, exactly similar to the moss of Blair-Drummond, to which it is united. Of these, 38 acres have been reclaimed and bear crops, and 20, being low moss, are under a thriving plantation. These 38 acres were improved by the late William Dundas, Esq., who had recently returned from India, and, during a short residence here, was most deservedly and universally esteemed. He died in the prime of life while visiting the Falls of Niagara.

As he had not a sufficient command of water at Ochtertyre, for conveniently reclaiming his deep moss, he improved that which is commonly called *spreadfield*, by trenching. This operation was performed by burying the moss under about sixteen inches of clay, which, by spade-labour, was thrown upon the surface, drains being at the same time made in it at proper distances.

The land thus treated bears abundance of some kinds of crops to repay the expense of improving. The spreadfield moss is that from which the peat from generation to generation has been dug, and is generally about two or two-and-a-half feet deep above the clay. The twenty acres of fine thriving young plantation are up-

on this kind of moss, which is kept dry by open ditches at regular distances.

Draining.—The proprietors and farmers of this parish have been peculiarly successful in adopting the most improved system of draining; but, as so much has been published of late respecting the construction of drains, in reference to their depth, distance, and the mode of filling them, it is deemed unnecessary to enter particularly into the subject here. It may be stated, however, that the utility of the frequent draining system was shown by Mr Ord, factor at Blair-Drummond, so early as 1826, in the north side of the cow park there, in which parallel drains were cut from top to bottom, at distances of fifteen feet, and filled with stones broken to a small size.

Partial draining was practised at a much earlier period, in the dryfield part of this parish than in the carse; but the system of deep ploughing and thorough draining, which Mr Smith of Deanston has done so much to introduce into general use, now prevails in both, and has been productive of the most beneficial results. That gentleman is so universally celebrated for his inventions in machinery, and improvements in agriculture, as to require no encomium here.

Mr M'Ewan of Black-dub, in this parish, who is a very intelligent and enterprising farmer, invented his well known drain-plough, the utility of which is particularly described in the Third Report of Drummond's Agricultural Museum. As a proof of its efficiency, it may be added, that he has opened drains by this plough in this parish to the extent of 448 acres, and about 100 acres in the neighbourhood.

It is highly creditable to the tenants of this parish in general, that they have been most skilful, persevering, and successful, not only in draining, but also in adopting all other modern agricultural improvements.

In 1831, a tile work was erected on the estate of Blair-Drummond, from which tiles are supplied gratis to the tenants of the carse lands, to the yearly value of about L.400, and the tenants are allowed to divide them among themselves, according to the size of their farms, the landlord reserving to himself the power of refusing them where the drains do not appear to be properly executed.

So sensible are the tenants of this advantage, that they vie with one another to meet the wishes of the landlord, by making their

drains properly, and by skilfully improving their farms. The dryfield farmers are accustomed to use broken stones for filling their drains, of which they have abundance on their farms, and which, by competent judges, are in light soils preferred to tiles.

Many of the most improved implements of husbandry are in general use here, not only in the cultivation of the soil, but also in the reaping of the crops, and in preparing the grain for the mill and the market.

Some years ago, Mr Drummond secured a beautiful part of his park, on which were some fine old trees, against the encroachments of the Teith. This was accomplished at an expense of about L.100 per month, during two summers, by a strong wall of large stones projected into the bed of the river, and well sloped backward to the edge of the bank. In some places large piles were driven by a machine to secure the foundation, and at one place in water of considerable depth. This work has stood firm and uninjured by flood or ice ever since its construction.

The progress of agricultural improvement in this parish gives the best proof of the comfortable relations that subsist between proprietors and tenants. The terms on which the land is let to the tenants, are by leases at so much per acre for nineteen years, in which they become bound to follow an improving system of rotation of crops by draining, liming, manuring, and judiciously ploughing their farms, the proprietors binding themselves at the same time to assist, according to the state of the farms, in bearing a part of these expenses. Hence a strong mutual interest in improving the soil.

The lease includes the obligations of the contracting parties in reference to fences and farm-buildings, &c. and the general practice in regard to houses is, that the proprietors pay for the building and furnish all the materials, and the tenants bear the expense of driving them. These houses in this parish, but especially in the eastern division of it, are very creditable to the proprietors and comfortable to the farmers, and have improved with the advancement of our country in civilization. On the farms of Colonel Graham and Mr Dundas, excellent new farm houses have lately been built, and also on the estate of Blair Drummond.

There were formerly five corn-mills in this parish, but now there are only two. One of these, called Little-mill, is at the western boundary, for the benefit of the farmers there, and the

other, called the Mill of Torr, is in the eastern division. This mill is convenient for the farmers, and is under good management. The buildings are good and suitable, the whole process of grinding and sifting is done by machinery, and the wheel is driven by water power. The miller dries and grinds the oats at 9d. per boll. The roads to this mill are so good and level that a horse can with ease carry an extra load. The mill is the property of Mr Drummond, who keeps it in repair.

Three mills, which were called the Mill of Burnbank, Mill of Muck, and Mill of Cambusdrennie, no longer exist. The last was either built or rebuilt about 1690, as a stone bearing that date was lately found where it stood. Either then or some years afterwards, George Drummond, or his son James, accomplished what was at that time a great undertaking, by forming a water lead along the whole length of the north side of the moss, to the extent of three miles, for conveying the water of the mill of Muck to the mill of Cambusdrennie.

A modern mill certainly executes more work than two did formerly, and the diminished consumption of oatmeal, and the improvement in machinery, may, in a great measure, explain why there are fewer mills now.

Some years ago, Mr Drummond erected a saw-mill near the church of Kincardine, which cuts timber by circular saws; and is of great convenience and utility to the proprietor and to the people in the neighbourhood, who get their timber cut for farm and other purposes at a trifling expense.

In addition to these improvements it may be proper here to refer to an elegant range of cottages which some years ago were built on the estate and near the house of Blair Drummond, for the accommodation of the people who are, from father to son, employed on this estate. These cottagers have houses and large gardens free of rent; receive assistance in planting their potato crops, and have from 10s. to 12s. of weekly wages, during the year. When the plantations are thinned, they have the use of the crops, &c. for firewood. Their condition is one of comparative ease and comfort, enhanced by the old having the happiness of seeing a portion of their offspring rising up to fill their places, and also by the hope of spending their own last hour in the place and house of their birth. The system is generous on the part of the proprietor as well as comfortable to his people,

and it is so carried on as not to relax diligence nor encourage vice on their part, but the contrary. The same kind system, descriptive of the good old country gentleman, has long existed at Ochtertyre, not only in the time of the late Mr Ramsay, but also under his enlightened and accomplished successors.

The facts which have already been stated in reference to the estate of Blair Drummond (which is strictly entailed,) refute the objections, in as far as it is concerned, which are occasionally made against entails, and this remark may be more completely confirmed by referring to the general system of management. Through several generations, part of it has been emerging from the condition of a wilderness into a state of high cultivation and abundance. On its improvement, above L.2000 are annually expended, and it may be noticed that on another entailed estate, at no great distance, where the improvements are very great, a larger sum was expended for several years. But in both these instances, the proprietors are zealous land improvers, and the intelligence, integrity, and success of their factors are so well established, that any sum for improvements may with advantage be put into their hands.

The landed proprietors, in general, have it in their power to encourage agricultural enterprise, and to increase the comfort and independence of the farmers, by placing objects of ambition within their reach. This can be done not only by setting the example of skilful improvements in general, but also in so regulating the size of their farms, as to give employment to men of small as well as of large capital. It is very encouraging to the skilful and industrious farm-servant, for example, to labour and economize, when he knows that he may in due time invest his hard-earned savings in a farm, where he becomes the master, and where he may rear his family in industry and comfort. It is a national benefit to give all the population as great a stake in the great interests of our country as possible; and as our peasantry, in peace and in war, are the main-springs of our wealth and strength, let them by all means be encouraged, so as to secure their patriotism and independence.

This principle is in operation in this parish: in proof of which it may be remarked, that the great number of small proprietors who farm their own estates have risen to this distinction by the very principle here recommended. Nor has it been overlooked by the more wealthy heritors. It became the more necessary, how-

ever, on the estate of Blair-Drummond, because, in consequence of the moss population being suddenly superadded to the usual numbers of the parish, arrangements became necessary for giving them employment. Their rural labours did not occupy them during the whole year; but they have always had sufficient employment beside the moss operations, in draining, making and repairing roads and fences, and other improvements. It is part of the system of management on the estate of Blair-Drummond, to give, as much as possible, constant employment to the same number of persons, that industry and good conduct may have their due reward. It is considered of importance for the best interests of this class of the community to encourage them to maintain a good character, by securing to them a steady demand for their labour, and to avoid the evils of vicissitude in their condition, inseparable from any sudden increase or diminution of expenditure. And perhaps in no other place will persons of this class be found more industrious, more skilful, and more respectable in their station than here, or in more comfortable circumstances. On the same principle the farms here are so varied in their extent, as to meet the capabilities of men both of large and small capital.

But to apply these remarks to the moss population and their possessions, it may be stated, that the moss-field was originally let to the tenants in farms of about eight acres to each, for fifty-seven years, and at a nominal rent per acre during a great portion of that time. From the length of the lease the tenants were usually called moss lairds, and, with their families, at one time amounted to about 1000 souls. On the expiry of the lease, however, the land must, to reimburse the proprietor, bring a much higher rent than formerly; but, as the tenement of each was too small to enable him, after the moss was removed, to pay even an ordinary rent, and at the same time maintain a profitable farming establishment, such as were not prepared to occupy larger farms contracted with their neighbours, for the disposal of their leases, which, with the consent of the proprietor, they were at liberty to sell. So early as 1792, there were sales of this description to the amount of L.849 Sterling, and since that time, the reversion of their leases has tripled in value, and many sales have taken place. In the progress of the moss improvement, the practice has prevailed of one tenant purchasing the possessions of two or more of his neigh-

hours, and thus, when the moss was removed, the same people, with the exception of those who had sold, remained in possession of the lands, and the extraordinary influx of that class of population diminished so gradually, as to prevent the evil of a number being suddenly thrown upon other resources. The farms where the moss used to be, are, by the wise system of the proprietor, made as small as the benefit of all parties would admit, and thus provision is made for continuing on these lands as many as possible of the original cultivators.

Quarries.—The sandstone of this parish is used for the purpose of building houses and dikes, and making roads. In some places it is too soft for such purposes, but in others it is hard and durable.

Fisheries.—There is a cruive dike extending across the Teith at Doune Castle, containing boxes for catching salmon. The right of fishing, which is of little value, belongs to the Earl of Moray, who pays yearly to the proprietor of Blair Drummond, in terms of an old decree-arbitral, 24½ merks Scots, being L.1, 7s. 9d. Sterling, for resting the dike on the south bank of the river. From this dike to the commencement of the town of Stirling's fishing near the junction of the Teith and Forth, the exclusive right of salmon-fishing is attached to the estate of Blair Drummond, but it is now much reduced in value, the only portion let producing a rent of no more than L.6 Sterling a year.

Produce.—The valued rent of this parish is L.4784 Scotch. It is difficult to give accurately the amount in money of the aggregate value of its raw produce; but the real rental has for many years greatly increased. In the last Statistical Account this rental was stated to be L.3500 Sterling, but it is now more than double this sum, not only in consequence of the great agricultural improvements here, but especially by the addition of about 1700 acres of good clay land, which have by the proprietors been reclaimed from moss since the last Statistical Account was written.

Associations.—A horticultural society has existed for some years in this parish, which has excited much competition in the cultivation of shrubs, flowers, and plants, and of all kinds of vegetables which are necessary for domestic use. It has been productive of much improvement in the appearance of the cottages and of their flower plots and gardens. Many of the cottages here are models of neatness and cleanliness.

V.—PAROCHIAL ECONOMY.

Villages.—There are no market-towns in this parish; the market-towns being Stirling, six miles, and Doune two miles distant from the manse. The only village in the parish is Thornhill, which includes Norriestoun, and in which there is a post-office subordinate to Stirling.

Police.—One of the recent improvements, which have proved beneficial to this parish, is the establishment of a county police. Previous to their appointment, vagrants, tinkers, and gipsies from various quarters were numerous; but, by the vigilance of the police, they have been suppressed.

Means of Communication.—From the Bridge of Drip, six miles of the turnpike road from Stirling to the Port of Monteith pass through this parish, and about two miles from the manse towards Doune parish. There is a cross road turnpike as far as Thornhill, entirely new made, and about five miles long, which runs from near the Bridge of Frew, past the west end of Thornhill to the top of the ridge in this parish, which overlooks Callander. The Nethertoun Bridge, across the Goodie, on this road, was built, and the new part of the road in the carse, and in the moss, was made at the expense of Mr Drummond; and if the proprietors in the neighbourhood of Callander were to extend the road on their side, there would be a very short line to Kippen, Fintry, and Glasgow. One public coach runs from Stirling to Callander twice a-week during winter and spring, and there are coaches daily on the same road during summer.

There is now a direct communication between the north and south sides of this strath by a suspension bridge, which was designed by James Smith, Esq. of Deanston, and erected at the expense of Colonel Graham of Meiklewood in 1831. An account of this bridge may be seen in the Third Report of Drummond's Agricultural Museum, and in the leading journals of that date.

From the nature of the soil, and the state of the banks of the Forth, much difficulty occurred in finding good foundations for the pedestals at each end, but these were surmounted by the genius of Mr Smith. The north end of the bridge rests on Colonel Graham's land in this parish, and the south end on a portion of land which he procured for the purpose from the proprietor of the estate of Gargunnoch. This bridge cost at least L.800, and

entitles the Colonel to the gratitude of the whole district, because, previously, the only means of crossing the Forth, from the Bridge of Drip to the Bridge of Frew (a distance of about ten miles,) was by insecure boats, and what was called a temporary peat bridge. A pontage is here levied from foot passengers, and all kinds of conveyances, and the Colonel, with the assistance of the Statute Labour Fund, keeps in good order the road from this point to the public road between Stirling and Doune. About a mile and a-half farther down the Forth, and shortly after the date of this bridge, he built another of smaller dimensions for L.350. The genius of Mr Smith appears in the simplicity, economy, and utility of this structure. It leads directly from Colonel Graham's new and elegant mansion-house, across the Forth to a part of his estate in this parish, part of which was, till lately, covered with moss, but is now, by moss-floating, levelling, draining, fencing, and planting, in a very profitable state of cultivation.

Ecclesiastical State.—The parish church, which is near the site of the old one, is too far north-west for a small proportion of the population; but the situation was central before a chapel was built at Norriestoun. With a few exceptions, however, the most remote population are only from two-and-a-half to three-and-a-half miles distant. The church, which accommodates 770 sitters, was built in 1814, and was opened for public worship in 1816.

The manse and offices were built in 1821, and are highly creditable to the taste and liberality of the heritors of the parish.

The glebe extends to seven acres, exclusive of the garden, road, and site of the manse and offices. The amount of stipend is 17 chalders, the one-half meal and the other barley, and payable according to the fiars of the county of Perth. There is also 1 boll and 1 firloft of oatmeal payable to the minister, by the proprietor of the Blair-Drummond estate, in lieu of a servitude of peat, according to a decision of the Court of Session, in the time of the late Rev. Christopher Tait. L.10 Sterling are also paid annually to the incumbent for defraying the expenses at the communion, by the award of the Court of Teinds, the sacrament being dispensed twice a-year.

The number of families belonging to the chapel at Norriestoun and the church of Kincardine in 1831, was about 530, and the number of persons 2888. The number of Dissenters was from 60 to 70, who belonged to the old and new light congregations

in Doune and Stirling. The attendance of the people in general on divine service in the Established Church is regular and devout, and they are attentive to the duties of family devotion. The number of communicants in the church of Kincardine is about 300 in winter, and about 400 in summer.

The Chapel of Ease at Norriestoun stands in this parish, and is four miles distant from the parish church. Gabriel Norrie of Norriestoun, a descendant of the ancient family of the Norries in this parish, gave the church-yard and the site of the church there, upwards of 170 years ago, for a burying ground and a place of worship, in connection with the Established Church of Scotland. The minister of this chapel receives his stipend from the rent of lands which were purchased by public and private collections, which were made by the authority of the General Assembly. The Presbytery of Dunblane are appointed by the Assembly to manage this fund called the Norriestoun fund, with authority to let the lands, keep in repair the farm buildings, pay the public burdens, and the stipend of the minister at Norriestoun. The stipend varies from L.80 to L.95 per annum according to the state of the buildings and the amount of rent the land produces. He has, in addition to this sum, six acres of glebe, a garden, and also a good house, but the house, like the farm buildings, is built and kept in repair out of the rent of the land.

There is a Bible Society in this parish for Bible and missionary purposes, whose annual contributions to the General Assembly's Schemes have been about L.15.

Education.—There are five schools in the parish; one parochial school, one General Assembly's school in Thornhill, one in Kincardine moss, one unendowed in Thornhill, and another near the bridge of Drip. In these schools the branches taught are, English reading, writing, arithmetic, practical mathematics, book-keeping, geography; and English grammar; and in the Assembly's school, in addition to these, the Greek, Latin, and French languages, and mathematics are taught. There is also a well attended Sabbath evening school.

The parochial schoolmaster's salary is the maximum, and in all respects he enjoys the legal accommodations. His school fees amount to about L.14 per annum, and in addition, he receives as session and heritors' clerk, and from a mortification, about L.12

annually. This mortification is recorded in the minute of the kirk-session as follows :

“ At Kincardine, Tuesday 30th April 1695, the Earl of Perth, after the Revolution, and with consent of the United Presbyteries of Stirling and Dunblane,* mortified, out of the vacant stipend of Kincardine, for the encouragement of a schoolmaster in this place, 2000 merks Scots money,” being L.111, 2s. 2½d. Sterling.

The school-fees, including all the classes, are from 1s. 6d. to 3s. 6d. per quarter for each pupil. The teacher of the Assembly's school receives from the Assembly's Committee, and some of the heritors of the Norriestoun district, an annual salary of L.22. The other emoluments of the teacher arise from the school-fees, which are from 2s. to 3s. per quarter, the number of scholars being 50. He has besides an excellent school-house, dwelling-house, and garden, free of rent, from the proprietor of the Blair-Drummond estate, who lately repaired the buildings at a great expense.

The teacher of the school in Kincardine moss has a free school-house and dwelling-house, and an acre of good land from Mr Drummond, and also a small gratuity for teaching a Sabbath evening school. His school-fees are from 1s. 6d. to 2s. 6d. per quarter, the number of scholars being about 100 during the greater part of the year. The other two schools, which are unendowed, are supported entirely by the school-fees, with the exception of school-houses and dwelling-houses free of rent. In the one there are 100 scholars, who pay individually, per quarter, from 1s. 6d. to 3s. 6d. In the other, which is near the Bridge of Drip, the number of scholars is 38, and the school-fees are from 2s. 6d. to 3s. 6d. per quarter for each pupil. The teacher receives in addition a small sum annually from the parents of his scholars, and an allowance for a garden from the proprietor.

The education in this parish is good, and the people are generally attentive in sending their children to the schools, which are at a convenient distance, so that no additional school is required. The ample provision which is made for education has had a salutary influence upon the moral character of the people.

Poor and Parochial Funds.—As the greater part of this parish is landward, the poor are generally few in number, and the system

* The presbyteries of Dunblane and Stirling are now disjoined.

of management such as has always prevailed in the rural parishes of Scotland. The paupers have, either by long residence or relationship, a claim upon the sympathy and benevolence of their friends or neighbours, who are always willing to assist in supporting them. On this principle, the kindly and unostentatious flow of private charity circulates from hand to hand and from heart to heart, and the aid from the poor's fund of the parish is administered as the circumstances of each individual may require. The minister and kirk-session select the most deserving objects of public charity, and adapt the monthly allowance to such as equitably as they can. There is no regular parochial assessment; but when extraordinary cases occur, the heritors frankly come forward with a voluntary contribution according to their valued rent to meet such cases. They have of late contributed in this way to a considerable amount for the support of two lunatics, a foundling child, and other extraordinary cases of pauperism. A legal assessment should, if possible, be avoided, especially in landward parishes, as tending to the increase of pauperism, and to the destruction of a feeling of independence among the poor; but still the legal assessment is the most equitable system of parochial support, especially in towns and boroughs, and where there are many Dissenters from the Establishment. The average number of paupers on the permanent roll during three consecutive years previous to 1838 was about 16, each of whom received on an average yearly £2, 11s. 3d.* The average annual contributions for their relief during these years was, from collections at the church door, £24, 18s.; and from mortcloth, proclamation, and other dues, £16, 2s. The latter sum includes £5, 17s., being the interest of money mortgaged for the benefit of the poor. Although the poor in some instances show a delicacy in seeking parochial relief, yet in general they do not think it degrading to receive it, and are content with what they receive.

Fairs.—There are no fairs held in this parish, except one for cattle at Thornhill on a small scale, being in the month of January annually.

Inns, &c.—In all this landward part of the parish, containing a population of about 1400, there is only one house licensed to sell ale or spirits, and only two in the village of Thornhill and its vi-

* This sum is less than the usual amount given to the poor, because the list of paupers for these years includes a greater number than usual from Thornhill district, from which the fund receives no aid.

cinity, containing a population of about 820. Public-houses were at one time more numerous than at present; and the diminution of their number has had a beneficial effect upon the morals and the pecuniary circumstances of the people. There being now less temptation to drink, instances of extravagance, idleness, and dissipation are fewer, the class of publicans is more select, and their houses are more orderly and their example better than formerly. The community are deeply indebted to the justices of the peace for their judicious attention to this and other subjects of police.

Fuel.—Coal and peat are both used in this parish for fuel. The coals at Greenyards and Bannockburn are generally preferred, and the price is about 14s. per ton, including tolls, carriage, and custom at Stirling. There are three tolls between Kincardine and Bannockburn. The road is in two counties, and the distance is nine miles.

The population of the Moss have generally used peat for fuel, of which, from their situation, they have had great abundance, and of excellent quality. At the commencement of reclaiming the moss, the peat was very cheap to themselves and to the surrounding district; but latterly, the steady demand for it at Stirling and the neighbouring villages, and especially at the distilleries, has raised the price to from 4s. to 7s. per cart-load, according to the quality of the peat, and the distance to which it is carried.

MISCELLANEOUS OBSERVATIONS.

By attending to the preceding Account, it will appear that the variations betwixt the state of the parish at present and at the date of the last Statistical Account are of importance.

Thus from 1600 to 1700 acres of excellent land have been reclaimed from moss, capable of producing from seven to eight bolls per acre of all kinds of grain. A new system of draining and improving land has been extensively adopted. Several miles of new turnpike roads have been made, and are well kept for the benefit of the whole district. Three new bridges have been built, which add greatly to the advantage of the public. There have been erected a new church and manse, and new offices; and also a great number of new farm-buildings and elegant cottages. Above a hundred acres have been planted on the estate of Blair-Drummond. Several acres have also been planted on the estate of Ochtertyre. The population, which, for some time, had greatly

increased by the settlement of the moss, has, for some years, decreased by emigration to Canada ; by the removal of some to other places when they sold their moss possessions, or no longer found occupation there ; and also by the villagers of Thornhill and Norriestoun removing to places of greater trade, for the more profitable employment of their families. The people being more independent in their circumstances give their children a better education than formerly, and hence a marked improvement in their general character.

January 1844.