

which was as high, some years ago, as L. 60 or L. 70 ; but which of late years has fallen to L. 30 or L. 40.

*Library.*—A parish library has existed for some years. Number of volumes about 200.

There is a benefit society for funerals.

There is no savings bank in the parish, but a good many of the inhabitants have taken advantage of the establishment of a bank in Dunfermline last year, on the national security system, by lodging their savings in it.

*Jail.*—A small jail, containing an apartment for debtors, and another for criminals, is attached to the town house ; it is considered sufficiently secure.

*Inns.*—There are two inns in the town, and five other houses in the town and parish, where spirituous liquors are either sold to customers, or consumed on the spot. It is gratifying to be able to state, that the number of such houses has considerably decreased of late years ; from which circumstance we would willingly argue, that the desire for indulgence in spirituous liquors, which is deplored as such an evil through the country, is on the decline in this place.

June 1839.

## PARISH OF ST MADDOES.

PRESBYTERY OF PERTH, SYNOD OF PERTH AND STIRLING.

THE REV. JAMES NOBLE, A. M. MINISTER.

### I.—TOPOGRAPHY AND NATURAL HISTORY.

*Name.*—IN ancient records, the name of this parish is almost invariably spelt St Madois instead of St Maddoes, its modern orthography. Neither of these modes however, in which its name is written, will account for the strange appellation it receives from the inhabitants of the district in which it lies, viz. *Semmiedores*. It appears to the writer of this account, that a corruption has taken place alike in its written orthography and its provincial pronunciation. There can be little doubt that the saint after whom it is

named was Madoch or MODOCH, who is said\* to have been a Bishop in Scotland in the third or fourth century. The tradition existing in this neighbourhood is, that on coming from France to Scotland, he landed on the banks of the Tay, and that having made converts to Christianity, a church was by them built and dedicated to him, where the present church of St Madoes stands, from which, at a subsequent period, the neighbouring district, when erected into a parish, received its name. Whether there be anything of truth in this tradition, we have no means of judging beyond its common reception; but that Madoch, of whom Ecclesiastical History makes mention as a Gallic Missionary to Scotland in the early times of Christianity, was the person from whom this parish originally derived its name, is much confirmed by the fact, that there is another parish, also within the bounds of the county of Perth, which, from being the place of his usual residence, or from his being buried there, acknowledges him as the origin of its name: I mean *Kilmadock*, in the presbytery of Dunblane. The likelihood therefore is, that the name of this parish originally was St Madoch or Madox, which would easily be corrupted into Madois, and that as easily into Madoes.

*Extent and Boundaries, &c.*—The parish of St Madoes is situated in that division of the county of Perth called the Carse of Gowrie. In point of extent, it is among the smallest in Scotland, containing only 1152 imperial acres. From the irregularity of its form, it is difficult to convey any idea of it in writing. Bounded on the south, by the river Tay; on the east, by the parish of Errol; on the north, by Kinfauns; and on the west, by Kinnoul, it lies about six miles from the city of Perth, and sixteen from Dundee, and therefore forms the western portion of that district so famed for its fertility—the Carse of Gowrie. Strictly speaking indeed, the Carse of Gowrie may be regarded as commencing about four miles westward of this parish, or with the level land which skirts the Tay at the bottom of Kinnoul Hill; but it is when approaching St Madoes that the Carse first begins to be *fully* disclosed to the view of the traveller from the west, and that suddenly he finds himself, from the narrow, though fruitful and picturesque limits by which he has been confined since he entered on carse-land, two miles eastward from the city of Perth,—ushered into the breadth and the beauty, the riches and the luxuriance, of that expanded and variegated ter-

\* Keith's History of Scottish Bishops.

ritory, which for centuries has been renowned as affording the finest in quality, as well as the largest in quantity of Scotland's fruits.

*Topographical Appearance.*—A casual observer would pronounce the aspect of the parish to be that of an uninterrupted flat, except towards the northern part, where it rises into a gentle elevation; but on minuter examination, apart from the more elevated ground, it consists of three different levels or flats, the first commencing on the verge of the Tay, and composed of land which partly within the last six, and wholly within the last fifty years, has been reclaimed or banked off from the river, the greater portion of it being from three to five feet below high-water mark,—the second from six to eight feet higher, having also at no very distant period been under water,—the third and by much the most extensive, rising to the height of fourteen feet above the second, (this is the general level of the Carse of Gowrie). Then commences a gradual ascent, which terminates at an elevation of 42 feet more, the highest part of the parish being thus 62 feet above the level of the Tay at high-water mark. Towards the northern boundary, there is a descent again, corresponding to the ascent from the highest level on the south. The land along this boundary is flat. Like the highest level referred to, it is about 20 feet above the Tay at high-water mark.

Seen from Inchyra Hill, an eminence about half a-mile to the north-west, which places it completely under the observer's eye, this parish presents a very captivating landscape. Skirted by the noble Tay, receiving on the opposite side its finest tributary,—the Earn,—beyond which to the east and west, respectively, appear the town of Newburgh, and the ancient capital of the Picts, Abernethy, resting on the slope of a range of rugged hills; traversed by numerous hedge-rows of oak, elm, and beech, mature in age, studded too with solitary trees of splendid growth and handsome form, that "tell where once some cottage garden bloomed," and holding in its bosom Pitfour Castle with its fine demesne, and the church shewing its humble spire from amid a screen of ancient trees,—the scene is altogether one of the most beautiful that can well be contemplated; and seldom is an observer found to depart from it, without expressing his admiration of the mingled richness, repose, and grace that distinguish it.

*Meteorology.*—The climate is here peculiarly temperate. A variety of circumstances, which the most inattentive observer can hardly fail to notice, indicates and attests the truth of this. Green

pease and potatoes may, with ordinary care, be counted on by the first week of June in the sheltered border. Not only do the more common fruits cultivated in Scotland, such as the apple, the pear, and the apricot, come early to maturity, but the peach, the nectarine, and the fig, are found to bear abundantly, and to ripen to high perfection. The *Fuchsia*, the *Passiflora purpurea*, and several varieties of the *Rosa Indica*, may be seen in ordinary seasons, flowering in the open border in the middle of November; and without any extraordinary protection, these and other exotics even more tender, are found to survive the winter. Still there are drawbacks to be mentioned. In the months of April and May, we are subjected to a *haar* or thick vapour with cold nipping breezes from the east. These prevail for several days at a time, and should they happen during the period when the fruit-trees begin to expand their blossom, they throw a damp over the hopes of the orchardist. In autumn and winter again, rime or hoar-frost is very frequent, and may be seen clothing the trees on the low grounds with a fantastic though beautiful icy foliage, while to the braes around it does not extend. On the other hand, however, snow seldom falls with us but to disappear, suddenly melting away, so that it is quite a common thing to see the hills and uplands within a mile and a-half, deeply covered with a wintry mantle, while the plough is busy at work in the plains below.

By comparing meteorological registers kept here, and in the neighbourhood within a range of three miles, and at heights of from 50 to 150 feet above the level of the sea, I have been enabled to form the following table, which may be regarded as affording a pretty correct account of the average results of meteorological observations for the last six years. The observations were taken at a quarter past nine in the morning, and half-past eight in the evening.

Year.	Morning.		Evening.		Mean temp. for the year.	Depth of rain.
	Bar.	Therm.	Bar.	Therm.		
1832	29.700	49.895	29.716	47.175	48.788	26.17
1833	29.592	48.804	29.607	46.511	47.516	35.
1834	29.731	49.713	29.728	47.170	48.598	23.02
1835	29.645	48.171	29.632	45.503	46.901	25.67
1836	29.463	47.188	29.461	44.687	45.504	33.72
1837	29.716	47.403	29.719	44.506	45.518	27.19

In the temperature, as well as the pressure of the atmosphere, as exhibited by the above table, indications of a genial climate may readily be perceived. The prevailing winds are from south-west

and west. From the north wind, which is generally so blighting, we are greatly sheltered by the hills that form the northern boundary of the Carse of Gowrie.

From the previous statements a pretty correct idea may be formed of the climate in this part of the country. In salubrity it may compete with any part of Scotland. A superabundance of moisture, at a period not more remote than sixty years, rendered it productive of ague; but from the extensive drainage to which the land has been subjected, and the consequent disappearance of those marshy exhalations so pernicious to health, the disease referred to is now never heard of, nor is there any other disease which can be said to be peculiar to the climate. Typhus fever has sometimes prevailed, though not in its most fatal type, and its introduction could generally be traced to individuals who had brought it from some infected town or district. Pulmonary affections are rare, calculous complaints almost unknown, and apoplectic attacks very uncommon. Colds, rheumatisms, and inflammations are our most prevalent distempers.

*Hydrography.*—As already stated, the Frith of Tay forms the southern boundary of the parish. It is here something more than a mile in breadth. Its greatest depth at high water averages 17 feet.

A *pow* or drain, in which is a sluggish stream, winds along the north and west sides of the parish, forming the march between it and portions of Kinfauns and Kinnoul. It is almost dry during the summer months, but in winter and autumn its banks are frequently overflowed, owing to the quantity of water, which, after heavy falls of rain or snow, it receives from the braes of the Carse. When these overflowings occur, they *sometimes* do injury, by soaking or floating away the unhoused grain that may be within their reach, and *always* by driving mud into the drains, many of which empty themselves into the *pow*.

*Springs.*—There are several springs, which may be called perennial, in the parish. One of these, which is situated in the flower garden of Pitfour, is worthy of particular notice. It sends forth a very strong current at all times, the quantity varying little in summer or winter. Its supply is at the rate of 20 gallons imperial per minute. In some distant age it had no doubt been deemed worthy of sacred regard, for the name by which it is still designated is *Tranty* or *Trinity*.

*Geology.*—The whole district of the Carse of Gowrie, as is well known to geologists, rests upon what is termed the old red sand-

stone formation. In that portion of it comprised in this parish, and its immediate vicinity, this formation has been brought distinctly into view. In the low and level parts of the carse district, the superincumbent mass of alluvium is so immensely thick, that only in one single locality has the sandstone been reached. It is in the higher parts of it that opportunity has been afforded for fully examining the geological character of the strata. By a partial up-heaving of the strata, that slightly elevated ridge, lying between the Tay and the braes of the Carse, and running nearly west and east, from almost the western boundary of this parish to nearly a mile beyond the village of Errol, has been raised. In various localities in this ridge, the red sandstone has been brought so near the surface as to be opened for quarries, and thus made subject to investigation. In particular, two quarries have been opened, (one in this parish, called the Cot-town quarry of St Madoes, the property of Sir John Stuart Richardson, of Pitfour, Bart.; and another in the parish of Errol, the property of John Lee Allen, Esq. of Errol, about half a mile to the east of the former;) both on the summit of the afore-mentioned ridge, where the character of the formation is very obviously exhibited, and other most interesting circumstances connected with it, have been developed. Clashbennie, the latter of these quarries, are well known; this, though it is not within the limits of St Madoes' parish, may be regarded as geologically connected with it; and I do not, therefore, hesitate to interfere a little with the geology of Clashbennie.

The sandstone lies in beds, varying in thickness from one foot to three feet, with thin layers of clay between them. These beds exhibit very much the same appearance, with this exception, that now and then a bed of a brecciated aspect presents itself. Evidences of the action of water in their formation are very obvious, the different layers or laminae, (if we may apply the term,) of which they are made up, being easily traced by the observer. These most generally lie parallel to the plane of stratification, and are sometimes straight, implying tranquillity,—and sometimes more or less undulated, indicating a corresponding commotion, at the period of deposition. Beds are also to be seen, whose layers are oblique, forming angles of various degrees, with the plane of stratification. Such, however, are rare; and considering that they present their layers of deposition straight as well as undulated, there is difficulty in accounting for the peculiar form they have assumed. It is but seldom that pebbles of any kind are found im-

bedded in the sandstone. When they do occur they are generally small, very rarely so large as a pigeon's egg, always water-worn, and belonging to the primitive rocks. In the brecciated beds innumerable nodules appear both of brown and green matter, flatly elliptical in form, compact in texture, but soft and soapy to the touch. These are generally supposed to be indurated clay.

The dip of the strata varies exceedingly. In the Cot-town of St Maddoes quarry, it is about  $10^{\circ}$  towards north-west. In that of Clashbennie, which, to the most casual observation, presents extraordinary dislocation and confusion, it will be found in one corner not more than  $2^{\circ}$ , and in another as much as  $36^{\circ}$ ; and perhaps in opposite directions, but the grand dip of the strata is undoubtedly towards north-east. The cause of peculiar disturbance in the stratification is a local one. It is found in the protrusion of a mass of trap, conically formed, through the strata. This exists in one of the most dislocated portions of the quarry, and from deep working was brought into view. The apex of the trap cone might be from sixteen to eighteen feet below the surface of the highest bed. The Sidlaw hills, which form the northern boundary of the Carse of Gowrie, are a trap range, and bear in them evidences of having been lifted through the old red sandstone strata. In various parts at different elevations, portions of these are discovered, generally in great confusion, the lines of stratification being almost indiscernible; and whenever they appear in contact with the trap they are highly indurated. In other parts along the base of the hills, the sandstone is found beneath the trap, the latter having manifestly flowed over it. The ridge of sandstone already referred to, which runs nearly parallel to the Sidlaws from the west side of this parish to the east of the village of Errol, in all probability owed its elevation to the same agency by which the adjacent trap-hills were heaved up. From the circumstance however, distinctly ascertained, that the strata to the south of the Tay have their dip and inclination in a south-eastern direction, while generally those to the north of the Tay have their dip and inclination in an opposite direction, the great axis of elevation applicable to both must be sought for about the line of the present estuary of the Tay.

*Organic Remains.*—Various kinds of these, some of them highly interesting, have been found in both of the fore-mentioned quarries. In them, as in all of the old red sandstone quarries of the district, there may be perceived multitudes of circular spots, varying in diameter from one to eight or ten inches, distinguished by

their dull yellowish colour. On investigation, each of them is found to derive its circularity from being the section of a sphere, and not to be only a thin superficial lamina. Moreover, at the centre of the sphere, there is generally to be discerned a speck differing in appearance from what surrounds it, and lately, I have found numbers of these spheres formed around a very small portion of a scaly substance, so that there can be little doubt they have originated from the influence of organic matter.

In both quarries, scales of fishes exist in great quantities; the deeper the beds, the more abundant are they, particularly in those of a brecciated character. There is one variety very prevalent. Specimens of this may be picked up at any time. Their ordinary size is about an inch and a half in diameter, and a sixteenth of an inch in thickness; but they have been found as large as three inches in diameter, and a tenth of an inch in thickness. Besides this variety, which is the only one that hitherto has been publicly noticed, I have discovered other five, which are obviously distinct, three of them in Clashbennie, and two in Cot-town quarry. All of these are of rare occurrence. Some of them are large scales, being from two to three inches in diameter; one has a strong resemblance to those of the *Megalychthys Hibberti*. Besides scales, the teeth, spines, jaw-bones, and other bones of fishes are sometimes to be met with; portions of rays and fins, more rarely; coprolites frequently; and I have in my possession the eye of a fish, with its pupil, lid, and other appendages imbedded in a piece of sandstone, all as vividly exhibiting the external organization, as though it had immediately fallen from its original position.

Considering the quantity of scales with which the strata abound, it is to be wondered at, that only a very few specimens have been found, exhibiting either complete impressions, or impressions of any large or important parts of fishes. A good many years ago, a specimen which now belongs to the Antiquarian Society of Perth, and which is obviously the fossilized portion of a fish, extending from the shoulders to the tail, was found in Clashbennie quarry; it is seven inches long, two inches in depth, and about three quarters of an inch thick. Although their beds are marked, there are now no scales upon it, neither are there any traces of fins to be discovered. This fossil has, by M. Agassiz, been set down to the genus *Palaeoniscus*. It was not, however, till July 1836 that any specimen was discovered, which could serve to determine to what genus of fishes those scales, so abundantly distributed throughout

the rock, both at Cot-town and Clashbennie, had belonged. Then an uncommonly beautiful and complete one was found, covered with scales similar to those prevailing in the rock, few of them being disturbed from their original regularity. To the general description which has already been given of this fossil fish in the Statistical Account of the parish of Errol (pp. 374—376), there may be added some particulars of importance. As there stated, its length is  $27\frac{1}{2}$  inches, and breadth 13 inches across the shoulders. It is proper further to mention that the length of its head, which has no scales like those on the body, but a uniform shagreen-looking covering, is four inches, and its breadth seven inches. From the circumstance of the adherence of its back to a mass of sandstone, it is difficult to determine accurately its depth, but it may be something more than four inches, so that it is decidedly a flat fish. Taking into account the size of the scales,—which is pretty uniform (about two inches diameter), excepting that of those towards the caudal extremities, which all at once dwindle into three-fourths of an inch in diameter,—and the tabular extent of sandstone which this fossil covers, it is perhaps one of the finest ichthyolites that has yet been brought to view. Being anxious to make it subservient to the interests of science, the author of this Account, to whom it belongs, has subjected it to the inspection of the most eminent of our geologists, and it has already proved useful. M. Agassiz, to whom a drawing of it was sent by R. Murchison, Esq. had previously supposed the prevalent Cot-town and Clashbennie scales to belong to a species of fish which he named *Gyrolepes giganteus*. Having described that species, however, from a defective specimen, he had committed a generic mistake, which, from the completeness of my specimen, he has now been enabled to rectify, and instead of being, as his remarks in his great work (v. liv. p. 172) erroneously indicated—a *Gyrolepes giganteus*, it proves to be a new species of the genus *Holoptychus*, which he has named *Holoptychus nobilissimus*. Other species of the same genus have been found in the limestone of Burdie-House (Edinburgh), and in the Gamrie deposit (Banffshire); but “this individual,” Agassiz writes, “will enable me at length to define precisely the characters of the genus which I named *Holoptychus* from the folds of the scales.” The *Holoptychus nobilissimus*, Agass. is figured and minutely described in “The Silurian System of Rocks,” a large work just published by R. J. Murchison, Esq. F. R. S., V. P. G. S., &c. in which all the ancient formations between the coal measures

and the slaty rocks are classified according to their stratigraphical and zoological characters.

There has not been found any other specimen of a *complete* fossil fish, as far as is known to the writer. Several interesting fragments or portions, such as heads with the shoulders, and tails with the fins, are possessed by different individuals; but there is not any of these calculated to throw light on the character of those fishes to which the other scales I have discovered had belonged. They are all of them clearly of the genus *Holoptychus*. There is one specimen, however, in the possession of Miss Craigie of Glendoick, consisting of the head and shoulders of a fish, worthy of special notice,—for, though it be manifestly a portion of one of the genus *Holoptychus*, it is marked by some obvious characteristics of a distinctive species. If complete, it would probably have been about a foot long, and three and a-half inches broad. Its scales are proportionally smaller than those on the large specimen already referred to, but instead of having *ten* rows of these like that specimen, running from the neck towards the caudal fins, it has only *six*. Organic remains of a different class have also been found in the old red sandstone. These are the more interesting, that they appear not only to belong to a new *species*, but to be the first, I believe, of the *genus*, that have as yet been discovered in any of the members of the carboniferous system. The first fragments of this class that were found are noticed in the Statistical Account of Errol parish, (p. 376). They consisted of a considerable number of pieces, of various, but principally of *vandyked* shapes, of sizes from 2 to 10 inches long. They had every appearance of organisms, being very distinct in their outlines, having the upper surface divided into *rectangular* compartments, and their edges turned under like a scroll; but so strange was their aspect—so utterly unlike any known appendages of organized creation—and so difficult was it to conceive any purpose which they could have served to a living creature, that the geologists who examined them were completely non-plussed. Few, however, doubted that they had belonged to some animal species of another age. Two specimens have since been obtained, which render it probable, that these extraordinary organisms had been owned by creatures of the *reptile* tribe. The first of these specimens to which I refer consists of a slab of sandstone five feet by two, which was accidentally discovered by the writer, having been bought as a cover for a drain. In this are imbedded a great number of angulated organisms similar

to those above referred to, and from having combined with them very vivid impressions of what strongly resemble thighs or legs, they had most probably pertained to the swimming apparatus of some creature of the Saurian genus, which indeed had greatly differed from any of that tribe that has hitherto been discovered, either in the new red sandstone or oolitic rocks. The slab now referred to, I may mention, was found in a different part of the quarry from that in which the organic remains, previously noticed, were found; and, moreover, when I went to the quarry, after discovering the impressions on the slab, to make inquiries about the locality from which it had been taken, I saw a mass of smashed fragments containing similar impressions, which, had it been possible to collect them, I have no doubt, would have covered a superficies six times the size of the slab. The other specimen of the same class was discovered a few weeks ago, and while it possesses all the distinguishing characteristics of the former one, the organisms contained in it had clearly belonged to a much younger creature, being but a-sixth part of the size of the former, and much more delicately formed, both as to outline and covering. From the size of the specimen, or pieces which form it, this creature, though young, could not have been less than five or six feet long. Whatever on more minute comparison and investigation, by M. Agassiz, (for he alone of living men is qualified to give a correct judgment regarding these fossil remains,) they may turn out to be, they are exceedingly important, if, as supposed, they exhibit organisms of a class of creatures apparently higher in the scale of organization than any that has as yet come to light from the old red sandstone, or its associate formations.

With a single exception, there has no specimen been discovered of organic remains belonging to the vegetable kingdom. That exception affords partial impressions of a plant seemingly of the equisetaceous class. It was found in the Cot-town quarry, and is now in the possession of Sir John S. Richardson, Bart.

*Deposits.*—In as far as there have been any opportunities afforded of judging, the deposits considered as underlying the cultivated soil, are, over the whole extent of the parish, *alluvial*, differing in character according to the positions which they occupy. In the level parts, on the south and north, where what is termed Carse soil forms the surface, they consist of an adhesive clay, sometimes assuming a stratified aspect, but generally the contrary, with here and there a bed of fine whitish-coloured sand. It is but seldom

that any fragments of rocks are to be seen either in this clay or sand, and no remains of animals or plants have been noticed in them. In the higher parts of the parish the alluvium is more varied in its character. In some places it consists of a species of clay, or, as it is called, *mortar*, peculiarly tough, and containing a considerable portion of calcareous matter, but altogether destitute of stones or pebbles. In other places it consists of a clayey earth mingled with quantities of the debris of the old red sand-stone and masses of the trap rocks; most commonly it consists of a soft brownish sand, in which the layers of deposition are apparent when a perpendicular section is made, and in which rounded water-worn boulders of gneiss, greenstone, &c. sometimes occur.

*Soils.*—In order to give any thing like a correct account of these, it is necessary to divide the parish into three parts. The highest part, which comprises about one-third of the whole, is a rich brown loam, mostly incumbent on the soft brownish sand above referred to, but partly on clay. That which lies on sand is deep, varying from  $1\frac{1}{2}$  to 3 feet, and consequently dry and very rich; that on clay is not so deep nor dry, though in other respects similar. In depth it varies from 10 to 20 inches. The next division extends along the south, west, and north sides of the former, being narrow on the north, but of considerable breadth on the south and west sides. The part of this division which lies farthest south has been reclaimed from the Tay at no very distant date, being but little elevated above high water-mark, and considerably below the height of spring tides. It is composed of a rich alluvial clayey loam, fitted for the production of every kind of crop in large returns. The remaining portion of this division consists of a strong adhesive, but fertile clay, with the exception of a small part on the south-east side of it, which is of a much less adhesive and less fertile nature. It is what is called “end clay,” *i. e.* clay standing in vertical layers. Being easily acted on by the weather,—frost quickly pulverizing it,—rain, again, running it into a solid body,—drought, as suddenly separating it into flakes—the roots of plants are thus so exposed to extremes, that they are prevented from deriving the nourishment needful for the promotion of their health and vigour. The third division consists of 80 acres imperial, exclusive of embankments, reclaimed since 1826 from the Tay. The soil is a very rich alluvial loam, producing heavy crops of all kinds without manure.

*Boulders.*—There are but few of these now to be seen; but

some fifty or sixty years ago, there were many of various sizes scattered over the surface, or slightly penetrating the soil in the higher part of the parish. In the progress of cultivation they have been removed, and are now to be seen about the foundations of farm-offices, &c. They were *invariably* of the primitive rocks, most generally of granite, gneiss, and primitive greenstone. This is a striking fact when viewed in connection with another fact already stated, viz. that in that species of alluvium, which consists of a clayey earth, mingled with debris of the old red sandstone, there are also considerable fragments of the trap-rocks; for it seems to intimate that, subsequent to that watery agency which had deposited the alluvium, or as geologists would perhaps term it, the diluvium mentioned, there had been some tremendous torrent which had rolled the superincumbent boulders from the primitive mountains in the west, the nearest of which is upwards of twenty miles distant.

*Zoology.*—The following *Mammalia* are found in the parish.

Vespertilio murinus, common rat.  
Erinaceus Europæus, hedgehog.  
Talpa Europæa, mole.  
Vulpes vulgaris, fox.  
Mustela vulgaris, weasel.  
Mus Musculus, common mouse.

Mus sylvaticus, wood mouse.  
—— Rattus, black rat.  
—— decumanus, brown do.  
Arvicola agrestis, field mouse.  
Sciurus vulgaris, squirrel.  
Lepus timidus, hare.

*The Reptiles* are but few, being only

Bufo vulgaris, toad.  
Rana temporaria, frog.

Triton aquaticus, eft.

*Of Birds* there is a considerable variety.

#### I. LAND BIRDS.

Perdix cinerea, partridge.  
Phasianus Colchicus, pheasant.  
Falco Nisus, sparrow-hawk.  
Corvus frugilegus, common crow.  
—— Pica, magpie.  
—— Monedula, jackdaw.  
—— cornix, hooded-crow.  
Strix stridula, screech owl.  
Turdus musicus, thrush.  
—— merula, blackbird.  
—— viscivorus, misselthrush.  
—— pilaris, fieldfare (in winter.)  
Hirundo rustica, swallow.  
Sylvia rubecula, redbreast.  
Accentor modularis, hedge sparrow.  
Columba palumbus, wood pigeon.  
Cuculus canorus, cuckoo.  
Alcedo ispida, kingfisher.  
Alauda arvensis, skylark.  
—— arborea, wood lark.  
Motacilla alba, water wagtail.  
Pyrgita domestica, house sparrow.  
Emberiza citrinella, yellow bunting.  
—— miliaria, common do.  
—— nivalis, snow flake (in winter.)

Pyrrhula vulgaris, bullfinch.  
Fringilla Chloris, greenfinch.  
—— Cœlebs, chaffinch.  
—— Carduelis, goldfinch.  
—— cannabina, brown linnet.  
Troglodytes vulgaris, common wren.  
Sylvia phoenicurus, redstart.  
Sturnus vulgaris, starling.

#### II. WADERS.

Ardea cinerea, heron.  
Ortygometra crex, corncrake.  
Gallinula chloropus, water hen.  
Scolopax rusticola, woodcock.  
—— major, great snipe,  
—— gallinago, common snipe.  
Vanellus cristatus, lapwing.

#### III. WATER BIRDS.

Anas Boschas, common mallard.  
—— Penelope, widgeon.  
—— mollissima, eider duck.  
—— Crecca, teal.  
—— Querquedula, summer teal.  
—— acuta, pintail duck.  
Mergus merganser, goosander.

Last winter, the wild swan frequented the Tay,—a circumstance which had not occurred for forty years before.

*The Fishes* are the following:—

Pleuronectes Flesus, water flounder.	Leuciscus Phoxinus, minnow.
Gasterosteus aculeatus, banstickle.	Clupea pilchardus, pilchard.
Salmo salar, salmon.	Acipenser Sturio, sturgeon.
—— trutta, salmon trout.	Petromyzon marinus, spotted lamprey.
—— albus, finnock.	—— fluviatilis, lesser do.
—— fario, common trout.	Anguilla vulgaris, common eel.
—— eperlanus, spirling.	

*Of Insects* the variety is great, particularly of the Lepidopterous class. They are only such, however, as are common in other parts of the country, and, excepting those that have lately proved injurious to the husbandman or the horticulturist, are scarcely worthy of being specified. Among these exceptions is the *wheat-fly*, a creature so tiny that its existence is endangered even by the commotion caused among the stalks and leaves of wheat by a slight breeze. Yet, under particular circumstances, with all its apparent insignificance, it might in the course of a few days not only materially abridge the farmer's wealth, but bring a nation to the verge of famine. This is not the place to enter into a minute history of its nature and habits, or to do any thing more than make a few general statements regarding it. The name of the *wheat-fly* has been given it on account of its affection for the wheat-plant, for though when under necessity it will betake itself to barley, to most if not to all the varieties of the *Triticum* genus it discovers a peculiar attachment. It is not, however, as a devourer of food for its own sustenance, but as a foreseeing provider of it for its progeny, that it seeks the wheat-plant. Depositing its eggs within the glumes of the wheat about the time when it comes in ear, these speedily are transformed into living worms, in various numbers, from one to six. These worms fix upon the vessels intended to carry the juices of the plant to the point where the grain is formed and nourished, and, cutting off the communication between the sap-channels and the embryo corn, they appropriate for their own aliment what in due time would have swelled and hardened into good fruit. At the time that the worms or maggots come to maturity, being then about one-tenth of an inch in length, the ears of wheat may be seen covered with multitudes of a small insect call the *Tipula Tritici*. This is a blind, but in its own peculiar way, an active and ardent destroyer of the wheat-fly. It watches the maggots, (supplying its defect of sight by incessant-

movements to and fro) as they are ready to be ejected from the glumes, which expand under the influence of a bright sun, and devotes them to the use of its future progeny,—piercing their body as a nidus for its eggs,—and these being hatched, their place of shelter is converted into nourishment for the young brood. If the maggots escape this enemy, they spring downwards, and soon penetrate from half to three quarters of an inch under the surface of the soil, where, if undisturbed, they remain till a suitable temperature produces a transformation, and brings them from the torpidity of the chrysalis into the activity of the fly-state. The safety of the wheat crop from their ravages, seems in a great measure, to depend upon the period at which this temperature occurs. If it take place about the time when the wheat comes in the ear, and the weather be quiet, mild, and favourable for laying eggs, the race is perpetuated in perilous multitudes; but if the temperature occur too early or too late for wheat-eating, or should it be accompanied with strong sunshine and a sharp breeze, their numbers are proportionally diminished. The havoc which the wheat-fly made in the Carse of Gowrie district of the crops of 1827, 1828, 1829, and 1830 is almost incredible. It has been computed, that during those four years, little less a sum than L. 100,000 Sterling was, through its instrumentality, lost to the tenantry. This loss was felt the more that the wheat crop is that on which they mainly count to meet the rent-day. Many of them had a sore wrestle ere they could rise above it, and there are some who have not yet been able to overcome the difficulties which it generated. Had the landlords not been patient and indulgent, as generally they were,—though only in a few cases to the extent which a just view of their own interest, as well as of the comfort of their tenantry, should have dictated,—perhaps half the number of these, or even more, would have been compelled to abandon what their industry and frugality entitled them to cherish,—the hope of a comfortable subsistence for their families, and on the wreck of their property to embark in doubtful speculation for some distant country. During the seasons that the wheat-fly committed such depredations, many remedies were proposed for the purpose of preventing future injury from its attacks,—some founded on the idea of its possible extirpation or subjugation, others on the alleged existence of one or more species of wheat which it refuses to employ as a residuum for its eggs. No attempt, however, of any consequence was made to apply these remedies. Before they had been

well proposed, indeed, the evil was abated; the fly, by a higher than human agency, had been checked in its destructive powers. The wheat crop of 1831 generally escaped its ravages, and though here and there, as has doubtless been always the case, in that year and those that have succeeded it, a field might be found in which partial damage was induced by its appearance, it has not proved a prevalent destroyer. May the search for remedies to prevent its injurious effects long continue to be as needless as in these latter years!

There are several insects which molest and prove injurious to our fruit-trees. The *common aphid* or green fly annually attacks the peach, nectarine, and plum-trees, and sometimes it descends even to the gooseberry-bushes. This insect is easily destroyed by the application of tobacco-juice, or of soap mixed with water. The *web-apple caterpillars*, which are very destructive if they be allowed to remain undisturbed, may also be easily subdued if care be taken to pick them off before they have separated from the web, and been distributed over the tree. The *Aphis lanigera* or woolly bug, has been gradually extending itself for the last thirty years; and although it does not seem to have infested the orchards in any great measure, there is scarcely a garden to be found in the district into which it has not been introduced. It is by far the most mischievous of all the insects that infest the apple-tree, to which its attacks are confined. Numbers of it cluster together and digging into the bark, they abstract the sap in its progress, produce excrescences in the branches, and thus render the tree sickly, while the fruit is crined. They know well, moreover, how to choose the best, for if there be a Ribston Pippin, a Cornish Jellyflower, or a Margile in the garden, they are almost sure to give them the preference. Various methods, such as clotting with oil and immersing in hot water, have been tried to eradicate them, but I have never known a single instance of their effectual removal from a tree when they had once fairly established themselves upon it. After some experience, and with a full sympathy with the reluctance which every one has to adopt such a course, I have arrived at the conviction, that the only certain way of getting rid of the *Aphis lanigera* is to root out and commit to the flames every tree infested with it. Every year I believe that this mode of procedure is delayed, will only afford new and most vexatious evidence of the necessity of adopting it, adding, in all probability, to the number of its victims.

*Botany.*—There is very little that is worthy of remark in the botanical productions of this parish. The plants that abound are those well known as invariably existing in deep loamy soils, or in alluvial clay. Though a considerable number of the rarest numbered in the *Scotica Flora*, are to be found in the neighbouring braes and glens, there are not any here that can well be called uncommon. Approaching to such may be mentioned the *Typha angustifolia*, and the *Listera ovata*, the former of which has its habitat in a mill-dam at Cairnie, and the latter in a belt of wood, on moist soil, to the south of Pitfour Castle.

*Plantations.*—The extent of land under wood is about 33 imperial acres;—the whole has been planted. About one-third of the plantations is from seventy to eighty, nearly another third, forty to forty-five, and the remainder from twelve to seventeen years old, with the exception of a few standard and hedge-row trees, which have reached to ages of from one hundred and twenty to one hundred and thirty years. Some of these, particularly the planes and elms, are of large dimensions, and of excellent quality of timber. Planes of size suitable for beetling beams and other mechanical purposes were sold in the end of 1837 at 3s. per cubic foot.

Almost every species of forest tree cultivated in this country has been planted in the parish; but the sorts most general are, the oak, elm, ash, plane, beech, lime, Spanish chestnut, horse-chestnut, (the three latter being principally for ornament,) larch, Scots fir, spruce, and silver fir. On the higher grounds all these kinds of trees grow luxuriantly, but elm and ash manifest symptoms of decay at an earlier period than any of the others; indeed, they are the only trees of deciduous character which show any tendency to disease in that part of the parish. This tendency, however, is not general, but in particular trees, and it is more frequently found on the slope than the summit. Most probably it arises from the roots penetrating into strata of the subsoil, through which the water from the higher ground descends. On the lower grounds, where the soil is strong clay, several sorts of trees do not thrive, particularly ash, elm, plane, and lime. Oak and Scots fir, however, attain great age, with rapidity of growth, and vigorous health. About twelve acres of poor clay soil were planted seventy years ago with Scots fir, which is still in good health. Larch and spruce planted at the same time, have for the last twenty years been in a state of internal decay. A very convincing proof of a fact, which, till within the last six or seven years, had escaped the notice of

arboriculturists—viz. a tendency in larch to disease when planted where Scots fir has grown—was afforded by a plantation in this part of the parish. The proprietor, fifteen years ago, having occasion for a considerable quantity of timber for the repair of steadings, &c. cleared off about two acres of Scots fir, and replanted the ground with oaks and larches, both of which throve to all appearance with great vigour; but in thinning out some of the larches, which were only intended as nurses for the oaks, they were found, though only six years planted, to be in a state of disease. The whole have since been cut out, and although externally they looked healthy, not an individual plant was sound; from the root even to the point of the smallest branch, the core was rapidly decaying. The plantations in the parish are kept in good order as to thinning and pruning. No periodical felling is adopted; but occasional cuttings of oak and other hard-wood take place.

## II.—CIVIL HISTORY.

*Traditionary Account.*—There is a vague popular tradition, that, at a remote period, this parish formed a portion of the parish of Rhind. Connected with this tradition it is alleged, that the Tay, which now divides them, instead of joining the Earn where it now does, took its course from somewhere about Inchyra, along the braes of the Carse to Invergowrie, where it formed a junction with the Earn. The only proof that believers in this tradition have to urge in behalf of its truth, is derived from the words of an ancient ballad—no great authority certainly—which speaks of

“ The stannin stanes o’ Semmiedores,  
“ *Be sou* the river Tay”—

Present circumstances and appearances are entirely at variance with the main fact which is alleged in this tradition. The existing levels are so utterly and obviously incompatible with the idea of the Tay having run by the bottom of the Carse braes, that any one who looks at them must at once dismiss it from his mind. That, at a period perhaps not very remote, a fresh water lake extended a considerable way along the braes of Carse, is indicated not only by soils, which have all the characteristics of lacustrine deposits, but also by beds of the *Arundo phragmites*, which present themselves in various places, and still more decidedly by a well-defined horizontal ledge or beach, with all the appearance of having been produced by the mechanical action of water. This ledge is peculiarly distinct along the whole of the north side of St Madoes parish. It is not unlikely that the tradition regarding

the former course of the Tay, owes its origin to the existence of such a lake as that just referred to.

*Parochial Registers.*—The existing parochial records, which contain the transactions of the kirk-session and registers of baptisms and marriages, consist of six volumes. The oldest of these is a curious one. It is entitled “The Book of the Assembly of St Maddos,” and is partly in the handwriting of the famous Alexander Lindsay, who was afterwards Bishop of Dunkeld. It commences with a minute of the 7th September 1591, in which there is contained an account of the nomination of elders and deacons, by commissioners from the presbytery of Perth, among whom were some of the most celebrated men of that period, viz. Patrick Galloway, William Rhind, Henry Guthrie, and Archibald Moncrieff. In this volume there is abundant evidence of a strict and faithful administration of the discipline of the church during the period to which it refers. There is also a variety of circumstances, incidentally stated, of an interesting character. The accounts, for instance, of collections made for harbours and bridges in different parts of the country, attest the interest then taken by the church in the civil prosperity of the people; and the names of witnesses at baptisms, with their designations, throw light upon the division of property at that period. This volume closes with a minute of the 30th of April 1615. The next existing volume commences with a minute of October 2, 1659, from which date to the present time, the session records are complete.

*State of property, ancient and modern.*—Sir John Stuart Richardson, Bart. of Pitfour, is the sole proprietor of the parish. It may be worthy of notice, that property here and in the neighbourhood is in a strikingly different position as to ownership, from what it was in former times. From the old session record just referred to, it appears that, 250 years back, there were in this parish four distinct lairdships, Pitfour, Pitcog, Cairnie, and Dumgreen; and from the same source it may be gathered, that the neighbouring district had been divided into small lairdships, four or five then existing for one that now exists. The principal land-owner in this parish, in 1592, was a man of high lineage, being one of the Cochrans of Dundonald. The lands of Pitfour, soon after that year, were sold by him to the Hays of Megginch; but he continued to reside here till his death; and his descendants, reduced to the humble condition of cottars, were to be found in the neighbouring parish of Errol, about a generation back, when the last of them died.

*Antiquities.*—Druidical circles had abounded in this part of the

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country, the remains of some seven or eight of them still existing between Perth and Dundee. Of these, one is in this parish. There is also a stone of some historical note here, viz. that stone on which, as tradition bears, the falcon alighted which measured out the territory awarded to Hay by Kenneth III. for his intrepid conduct at the battle of Luncarty. By some the whole of this tradition has been treated as fabulous, and, undoubtedly, there are portions of it not easily reconcilable with what are considered to be well-established facts; but, however that may be, the stone referred to has beyond all question been denominated the Hawk's Stone for many centuries past, the most ancient charters and historical records referring to it as *Saxum Falconis*: and one fact in favour of the traditional account connected with it is, that it does certainly lie upon the very westmost verge of what is known to have been the original property of the Hays of Errol.

In the churchyard there is a very beautiful specimen of that class of monuments, called Runic, from their imagined Norse or Danish origin. They are somewhat prevalent in this part of Scotland, other specimens being found at Abernethy, Mugdrum, Dupplin, Fowlis Wester, and Dunkeld. There is not any thing authentic known about their history, origin, or object; and although they were long supposed to have some connection with events that took place during Danish incursions, those who have lately been comparing them and investigating their characters, begin to think that there is more reason for linking them with the introduction of Christianity into this country. The St Madoes' stone is about 7 feet in length, and in width about 8 at bottom, and  $2\frac{1}{2}$  at top. Its thickness is 8 inches. It is composed of gray sandstone, similar to that which is found at Murray's Hall, fully six miles off. On the one side the sculpture is divided into five compartments, right under each other, and nearly equal in size. Each of the uppermost three is occupied by the figure of a man on horseback, the horse and rider being of the most grotesque form and unseemly proportions. The bridle, reins, bit, rings, and buckles, are minutely though rudely cut, and are in perfect preservation. The rider wears a cloak or mantle, somewhat like the short water-proof cloaks of our time, but with a flat crowned head piece, which leaves only a small portion of the face to be seen. In the fourth compartment is a serpent-shaped figure, with fretted ornaments, and something like a double-headed broken sceptre, both of which ornaments are to be found on most stones of the same class. Still

lower down, is the figure of a goat, a good deal defaced, and adjoining this, various sculptures almost obliterated. This side of the stone, though minutely carved, does not seem to have been squared or dressed beforehand. It bears no tool marks, and has several warts, as if just newly taken from the quarry. The side opposite is by far the richer and more beautiful. Its lines are as clear as if just from the hand of the artist. The principal figure is that of a cross, the upright portion of which occupies the whole length of the stone. The shaft and transept are beautifully enriched with very complicated tracery; both, round the point where they cross, are wreathed with a carved circle or halo. On each side of the shaft of the cross, beneath its transept, is a monstrous lizard-like figure, apparently in the agonies of death, from being crushed through at the loins by a savage-looking creature with a head like a wolf, body like a dog, and a thick curled tail. The two compartments adjoining the top of the cross are occupied by nondescripts, with monstrous and diminutive bodies, apparently gnawing their own backs. On the top, equally visible from both sides of the stone, are lizard-like figures *couchant*, facing each other.

*Modern Buildings.*—Pitfour Castle, the residence of the sole proprietor of the parish, is a large quadrangular building, standing on an artificial terrace, affording every species of accommodation befitting the rank and fortune of its possessor. It was principally erected by John Richardson, Esq. grandfather of the present proprietor, though the latter has made considerable additions to it. It is surrounded by a fine demesne, studded with every variety of trees in the most thriving condition, and ornamented by a flower-garden, beautifully situated, and tastefully laid out. Viewed in connection with its park, gardens, shrubberies, &c. there are few finer places to be seen in this part of the country.

*Eminent Men and Ministers.*—Alexander Lindsay, who was ordained minister of this parish in 1591, was a man of some note in his own times; and his name has come down to us in connection with a most interesting portion of our church's history, viz. the proceedings of the General Assembly of 1638. Himself a man of property, and one of a family of considerable influence in former days,—the Lindsays of Evelick,—he had easy access to court, where he soon became a favourite; and entering into its schemes for the establishment of Episcopacy in Scotland, he was in the year 1607 appointed Bishop of Dunkeld. For nearly thirty-two years, he discharged the duties of that office with a diligence and

moderation rare enough in these times, while he also retained the pastoral charge of St Madoes. From the records of the Presbytery of Perth, it is evident that he bestowed considerable pains in the management of that part of his diocese. As perpetual moderator, he appears down to the year 1632 to have been a very regular attender of the meetings of Presbytery, which were then of almost weekly occurrence. Like the other bishops of that period, when the power of Presbytery became again ascendant, Lindsay had complaints lodged against him for his *prelatic* conduct. These, as the record bears, were brought forward by the "Laird of Moncrieff and Mr William Row, in the name of the gentry and burghesses of the Presbyterie," and the bishop was called upon to answer them before the General Assembly of 1638. The Assembly found him guilty "of receiving consecration to the office of Episcopacie condemned by the Confession of Faith; of pressing the kirk with novations in the worship of God," &c.; and while he was "*deposed from the pretended Episcopall function, and suspended from all ministerial function,*" it was provided, that, "if he should acknowledge that Assembly, reverence its constitutions, and make his repentance conforme to the order prescribed, he should be continued in the ministrie of St Madoes." On the 30th of January 1639, he gave in his declaration of repentance to the Presbytery of Perth, and became again the humble minister of St Madoes, where he continued till his death, which happened soon after.

Archibald Stevenson, minister of this parish from 1747 to 1784, was a man of great talents, learning and piety. He was one of the leaders of the popular party in the Church, and in point of a knowledge of her constitution and laws, he was regarded as superior to them all. The late Dr Inglis of Edinburgh, who remembered his appearances in church courts, always spoke of him as second to no man in his day in the management of church matters. He left no token of his powers behind him, but what is to be found in a speech on Catholic Emancipation, (now very rare), in the General Assembly, 1779, distinguished by extraordinary sagacity, and great power of diction and of argument.\*

\* The following is a list of the ministers of this parish since the Reformation. A reader preceded the first Protestant minister, who was

Alexander Lindsay,	admitted 1591, died	1639
James Campbell	do. 1640, do.	1667
John Omev,	do. 1668, translated to Dumbarnie,	1676
George Drummond,	do. 1676, died,	1687
Thomas Hall,	do. 1688, ejected for disorderly practices,	1696
George Blair,	do. 1701, translated to Perth,	1706

## III.—POPULATION.

Although there are not any data by which the amount of the population in ancient times can be *correctly* determined, there can be no doubt that, looking at its present state, it has rather diminished than increased; for, from a roll of examinable persons, regularly kept from 1596 to 1617, it is evident that during that period they were considerably more numerous than they now are. Then, it appears, a large proportion of the people were huddled together in five or six hamlets or villages, each family having a few acres of land attached to their house. The majority of these hamlets has long since disappeared; the land attached to them having been thrown into large farms. For the last hundred years, the population has varied but little in amount, rating from 320 to 350, which latter is exactly its present number.

The average births for the last seven years is	5
deaths,	4½
marriages,	9
The average number of persons under 15 years of age is	127
betwixt 15 and 30,	97
30 and 50,	86
50 and 70,	27
70 and 80,	8
80 and 90,	3
The number of families in the parish is	62
chiefly employed in agriculture,	39
in trade, weaving, handicraft, &c.	14

There has been only 1 illegitimate birth in the parish during the last three years.

*Character of the People.*—It has often been remarked, that the inhabitants of the Carse of Gowrie are rather of a phlegmatic temperament, and somewhat wanting in quickness of apprehension. In as far as the people of this parish are concerned, the writer of this account has formed a very different opinion. Though a stranger might be ready to mistake a coolness and deliberation of manner by which they are characterized for constitutional heaviness, or a little reserve for lack of intelligence, he who comes into close and familiar intercourse with them in the ordinary matters of life, will soon discover, that while they are as much alive as men in general to what is going on in the world, they are shrewd, sensi-

John Dempster, admitted	1706, died,	1721
Robert Watson, do.	1722, do.	1727
Andrew Shaw, do.	1729, became Professor in St Andrews,	1740
Patrick Bannerman, do.	1741, translated to Kinnoull,	1746
Archibald Stevenson, do.	1747, died,	1784
David Black, do.	1785, translated to Edinburgh	1795
Thomas Kennedy, do.	1795,	1829
James Noble, do.	1828.	

ble, and calculating. In their worldly callings they are industrious; in their mode of life, frugal and provident; in their general conduct, sober and orderly, just and upright. They, as their fathers for generations past have been, are distinguished for their regularity and decorum in attending on divine ordinances, an obvious consequence of which is to be seen in their comparative exemption from flagrant immoralities.

#### IV. INDUSTRY.

*Agriculture.*—The parish, as previously stated, contains 1152½ acres standard Imperial measure, the whole of which, with the exception of 33 acres under wood, are arable. About 60 acres are laid out in permanent pasture, the remaining 1059 are regularly cultivated.

*Rents.*—The rents are fixed in grain, (with a very trivial exception), paid at the rate of the highest fiars' prices of the county. They average about 3½ bolls per Scots acre, in equal portions of wheat, barley, and oats. The average price by the highest fiars for the county for the last seven years for the 3 bolls (*i. e.* 4 bushels of wheat, 6 bushels of barley, and 6 bushels of oats), is L. 3, 2s., making the average rent per Scots acre L. 3, 7s. 2d., or L. 2, 13s. 8d. per acre Imperial. As to *Wages, Live-Stock, and Husbandry*, the remarks made in the account of the parish of Errol are entirely applicable to this parish, and therefore it is unnecessary to do more than refer to these remarks.

*Draining.*—The system of wedge or furrow-draining first introduced to this district sixteen years ago, and first practised on the farm of Pitfour Mains by Mr R. W. Rannie, has been adopted to a considerable extent by all the tenants in the parish; the result has been a great improvement, especially in the more retentive clays. Different materials have been used in the formation of these drains. When they were first introduced, turf was very generally used, but was found not to endure many years, particularly in clays much impregnated with ferruginous matter. Wood cut into boards four and a half inches broad by one inch or three quarters of an inch thick, was then adopted and found to answer well in tenacious clay; in more friable soils, stones broken to the size of road metal were preferred. Within the last five years, tiles have come into very general use for draining, but have not till the present year been introduced to this parish. The spirited proprietor, Sir John S. Richardson, having lately erected at a considerable expense an extensive range of buildings, consisting of drying sheds,

engine and moulding sheds, and kilns, for the purpose of manufacturing drain tiles by machinery, they are now within easy reach of the tenantry, who are beginning to employ them to a considerable extent. It cannot be doubted that much benefit will accrue to the surrounding district, as well as to Sir John's own property, from this manufactory. An article admirably adapted for draining will thus be brought within the reach of many, who, from the expense incurred by the purchase and carriage of wood and stones, which are with difficulty procured here, have hitherto been deterred from draining to any extent. Such, indeed, has been the demand for tiles since last spring, when their manufacture commenced, that Sir John has resolved to double the size of his sheds, &c., and to work the machinery by a steam-engine. Such too is the feeling towards him among the agriculturists not only in the Carse of Gowrie, but also in Strathearn and the Stormont, on account of his spirited conduct in setting agoing, solely at his own risk, this tile manufactory, that, while I am now writing, he is under an invitation by some three hundred of them to a public dinner, in which, I may be permitted to add, they are joined by a number of the inhabitants of Perth, from a sense of the obligations under which they lie to him for his attention to their commercial interests.

*Embankments.*—About 68 Scots acres of land have been here at different times reclaimed from the Tay by embankments. In 1826, in consequence of an arrangement between the proprietor and Mr R. W. Rannie, tenant Pitfour Mains, by which the latter agreed to raise an embankment at his own expense, and after being allowed to take the first crop rent free, to pay L. 4, 10s. annually per Scots acre for the reclaimed land during a lease of nineteen years, operations were commenced which resulted in the complete reclamation of fifty acres during the autumn of that year. The whole expense of embankment, sluices, levelling, water-cuts, and trenching amounted to L. 1530. So productive, however, did the new soil turn out, that Mr Rannie has been amply rewarded for his enterprise. According to his own account, he has had, *before liming and manuring*, on some parts of a field about 60 bolls of potatoes per acre, the average produce being from 40 to 50 bolls. *After liming and manuring* he has had on some parts of a field 70 bolls per acre, the average from 50 to 60 bolls of 32 stones Dutch to the boll. He has had of oats, *before liming and manuring*, from 10 to 11, *after liming and manuring* from 12 to 13 quar-

ters per acre, and of wheat from six to seven quarters per acre. He commenced liming in 1829 and manuring in 1835, the rotation up to that period being potatoes, and wheat or oats alternately. In 1833, Sir John Richardson reclaimed 18 acres more at an expense of L. 1200; and by means of head-dikes, breakwaters, &c., which he is from time to time throwing out in the river for the purpose of accumulating silt, upwards of 150 acres more may ultimately be added to the parish; of these from 15 to 20 may be banked off in the course of two years. It is worthy of being mentioned here, that Sir John, in a paper on his Embankments, read before the Highland Society, and for which he received the Society's medal, states, "that if various conflicting interests could be reconciled, there would be added to the Carse of Gowrie a tract of land equally rich with that which has been described, and extending to many thousands of acres." He adds, "This scheme was originally suggested by my grandfather forty years ago, and I trust that, before another forty years are gone, the now barren sand-banks of the estuary of the Tay may be converted into fertile fields."

*Fishings.*—The only fishing carried on here is the salmon, the right to which belongs solely to Sir John Richardson. The annual rent is estimated at about L. 1000.

*Average gross amount of raw produce.*

Wheat,	- - - -	L. 2800
Oats,	- - - -	850
Barley,	- - - -	892
Beans,	- - - -	580
Hay, (cultivated)	- - - -	842
Potatoes,	- - - -	1640
Turnips,	- - - -	360
Pasture,	- - - -	261
Orchard fruit,	- - - -	25
Fishings,	- - - -	1500
Things of wood,	- - - -	80
Reeds,	- - - -	20

Total value of raw produce, L. 9720

The valued rent of the parish is L. 1300 Scots. The real rent is about L. 4000 Sterling.

*Manufactures.*—The only branch of manufacture carried on in the parish is that of linen and coarse canvass, the flax and hemp being supplied to hand-loom weavers by Dundee merchants, who pay so much per web for weaving. The number of these weavers does not exceed a dozen, and their labours at the loom are confined to the winter months, as they prefer being employed at the salmon-fishery during the rest of the year.

## V.—PAROCHIAL ECONOMY.

*Market-Town.*—The nearest market-town is Perth, six miles distant, where the produce of the parish is principally disposed of, and from which the inhabitants receive their supplies.

*Villages.*—There are two small villages, named Hawkstone and Cot-town, with a population of 50 and 67 respectively.

*Means of Communication.*—The post-town is Perth, with which by coaches and carriers there are daily opportunities of intercourse. The great north road from Perth to Aberdeen by Dundee runs along the northern boundary of the parish, and the road from Perth to Errol passes through its northern parts. Various roads intersect it, affording easy access from all the farm-steadings to the turnpike-road from Perth to Dundee.

*New Pier.*—A pier and shorehouse were erected about seven years ago by the proprietor on his reclaimed land, nearly opposite to the junction of the rivers Tay and Earn. There has thus been provided an excellent and most convenient shipping-place, very advantageous to the inhabitants of the parish. Large quantities of potatoes are here shipped annually for the London market, while coals, lime, manure, &c. are received. The shore-dues are at the rate of 1½d. per ton.

*Ecclesiastical State.*—Sir John Stuart Richardson is the patron. The parish church, although situated near the northern boundary of the parish, cannot be said to be inconveniently distant from any of the inhabitants, as there are not any of them farther from it than two miles. The old church was taken down, and the present one built in 1798. It is in good repair, and in every way comfortable, having lately had attached to it a stove for warming it with heated air.

The number of sittings in the church is 410, a number fitted to accommodate nearly twice the examinable inhabitants of the parish. A considerable portion of them, however, are occupied by persons from the neighbouring parishes of Kinnoul, Kinfauns, and Errol, who are from two and a-half to six miles distant from their own parish churches, while they are quite close to St Maddoes' church; so that there is not a sitting that is not appropriated and occupied. There are no seat-rents exacted, the proprietor permitting even those persons who are in the habit of coming from the fore-mentioned parishes to have free sittings.

The only benefaction on record is one of 200 marks left by Mr Campbell, minister of the parish in 1676, which, with good management, and savings from the weekly contributions added to it, from

time to time, by the kirk-session, has accumulated to a considerable sum, the interest of which is employed for the support of the poor.

The manse was built in 1804, and repaired in 1829. The glebe consists of between 22 and 23 acres Scots, exclusive of garden, orchard, shrubberies, &c. which may contain two acres more. The soil is generally of excellent quality. Having lately been subjected to thorough draining, its productive powers have been much increased, especially in reference to green crops. According to the mode in which land is let in the parish, the glebe would draw an annual rent of three bolls of grain per acre, (*i. e.* 4 bushels of wheat, 6 of oats, and 6 of barley,) which, according to the average of the fiars prices of the county for the last five years, would amount to between L. 70 and L. 80. The present stipend is 14 chalders, half meal, half barley, the average amount of which for the last five years, inclusive of an allowance of L. 8, 6s. 8d. for communion elements, is L. 208, 10s. 5d. The last augmentation took place in 1818. The number of families in the parish who attend the Established Church is 62, and the number of persons of all ages belonging to it is 335. The number of families not in the parish, but who regularly attend the church of St Madoes, is 34, these affording upwards of 100 church-goers. There are 4 families in the parish belonging to the Dissenters, containing 15 persons of all ages. Divine service at the Established Church is attended by all classes with the greatest regularity. The sacrament of the Lord's Supper is dispensed twice a year, (in February and in August); at the former time the average number of communicants is 225, at the latter 245; of these from 70 to 80 come from the neighbouring parishes.

There is a society for religious purposes in the parish. Its members all belong to the Established Church, and its funds are mainly appropriated to the advancement of the Church of Scotland's four great schemes. The average amount of these for the last ten years is L. 25 annually, this partly obtained by private subscriptions, and partly by public collections.

*Education.*—There is no week-day school in the parish but the parochial, in which English reading and grammar, writing, arithmetic, book-keeping, practical mathematics, and geography, with Latin and Greek, if required, are taught. The schoolmaster has the legal accommodation and the maximum salary. The school fees are small and ill paid, the whole sum realized from them not exceeding L. 10 Sterling annually, although the average num-

ber of scholars throughout the year be nearly 50. It appears from one of the old session-records that, upwards of 100 years ago, the then Laird of Pitfour set apart two acres of land for the benefit of the schoolmaster in all time coming; but somehow or another they have since been swallowed up, and even tradition does not very clearly mark their locality.

There is a Sabbath school taught by the minister and schoolmaster, which is pretty numerously attended not only by children belonging to the parish, but also by those of the parents from neighbouring parishes who attend the church of St Maddoes, and even by some children of Dissenting parents. It numbers at present 51.

*Literature.*—There is a religious library which was instituted in 1836, by the liberality of Lady Richardson, to which all the people who are in the habit of attending the church, as well as the parishioners of St Maddoes, have access for the small sum of 4½d. per quarter. It now consists of 200 volumes.

*Poor and Parochial Funds.*—The average number of persons for the last ten years, who have received parochial aid in one form or another, is ten. Of these four have been regularly on the poor's roll, three of whom received from 6s. to 7s. a month each, besides a free house and two bolls of coals. The fourth is a fatuous person, who is boarded at the expense of the parish, and whose maintenance and clothing amount to between L. 16 and L. 17 a year. The annual amount of collections in church averages about L. 30; and from other sources, as money lent on hand, mortcloth dues, &c. there is an additional sum of L. 23, available for the benefit of the poor. It ought to be mentioned here, that, besides the allowance of two bolls of coals by the kirk-session, to each pauper annually, Sir John and Lady Richardson are in the habit of sending them firewood and coals. There yet remains among the poor a good deal of that spirit which recoils at the idea of parochial relief; and although they will readily enough receive what is offered as private charity, they are not only reluctant to apply for, but unwilling to take aid from the session funds.

*Inns and Ale-houses.*—There is but one in the parish, situated on the pier. It is a necessary convenience not only to those who may have to transact business in shipping their farm produce, but to the traveller who has to cross the ferry, which is here established between this part of the Carse of Gowrie district and the opposite districts of Fife and Strathearn. Being well conducted, it

cannot be said to have any evil effect upon the morals of the people.

*Fuel.*—Among the poorer classes a good deal of wood is used, which is procured from the periodical thinnings and fellings in the parish and neighbourhood. Coal, however, is generally used, partly from the south coast of Fife, and partly from Newcastle, and being landed at the parish pier, is secured at a moderate rate—15s. per ton for Scots, and 16s. 6d. per ton for English.

#### MISCELLANEOUS OBSERVATIONS.

The more striking variations betwixt the present state of the parish and that which existed at the time of the last Statistical Account are, its enlargement by the making up and embanking of new lands on the river side,—its more complete drainage, the fields in general not only being pervaded by furrow drains, but every bog and morass being dried, so that there is not a single fall of ground in the parish, with the exception of what is under wood, that is not fitted for bearing grain,—and the improved means of communication from one part of it to another by good roads. The feeling among the farmers with regard to the adoption of new modes of cultivation, and supposed improvements in agriculture, has also considerably changed. Prejudices in behalf of the olden ways and plans have greatly abated, and whether it be by giving a fair trial to methods of culture, which would in former times have been despised, or to new varieties of grain, which once would have been rejected, the farmers are now showing that they have sense, and are reaping their reward. With regard to the improvements of which the parish is still susceptible by a better system of husbandry, there cannot be much said; but certainly for many years past there has been a far larger proportion of wheat sown than is consistent with justice to the soil; and the writer of this account is persuaded, from his own observation and experience, that, if the agriculturists of this parish and of the Carse of Gowrie in general, would adopt a system of cropping by which they should not have wheat oftener than once every four years, they would be gainers in the end.

*January 1839.*