

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

SESSION 1864-65.



PRINTED BY W. R. M'DIARMID AND CO.

1867.

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“The boundless store
Of charms which Nature to her votary yields.”
POPE.

“For I have learned
To look on Nature, not as in the hour
Of thoughtless youth, but hearing oftentimes
The still sad music of humanity,
Nor harsh nor grating, though of ample power
To chasten and subdue.”

WORDSWORTH.

CONTENTS.

	PAGE.
JOURNAL OF THE PROCEEDINGS	1
LIST OF MEMBERS	14
ACCOUNTS OF TREASURER	17
ADDRESS OF THE PRESIDENT	1
NOTES ON SOME RARE MINERALS OCCURRING IN THE DISTRICT. BY PATRICK DUDGEON, ESQ. OF CARGEN	25
THE ABBOT'S STONE IN DUNDRENNAN ABBEY. BY JAS. STARKE, F.S.A. SCOT.	27
ON CERTAIN "MARKINGS" ON THE DRUID CIRCLE IN HOLYWOOD. BY DR. DICKSON, THE SECRETARY	29
NOTES ON THE DRUID CIRCLES IN THE NEIGHBOURHOOD OF INVER- NESS. BY DR. GILCHRIST	33
THE REGULATION OF FARM SERVANTS IN DUMFRIESSHIRE IN 1751. BY W. R. M'DIARMID	37
CLERICAL CUSTOMS IN THE OLDEN TIME—PREACHING AND THE PULPIT. BY REV. D. HOGG, KIRKMAHOE	43
A FEW DUMFRIESSHIRE WORDS NOT IN BURNS AND NOT CURRENT IN OTHER COUNTIES, <i>e.g.</i> RENFREWSHIRE. BY MR. JAMES SHAW, TYNRON.	56
POOR LAWS IN DUMFRIESSHIRE IN 1750. BY W. R. M'DIARMID	58
THE APPRECIATION OF BEAUTY BY ANIMALS. BY MR. JAMES SHAW, TYNRON	65



JOURNAL OF THE PROCEEDINGS

OF THE

*Dumfriesshire & Galloway Natural History and
Antiquarian Society.*

November 1st, 1864.

THE SOCIETY held the first meeting of the Session—being the Annual Meeting—in their Apartment in the Dumfries and Galloway Club Rooms,

DR. GRIERSON, Thornhill, in the Chair.

The following New Members were enrolled :—Ordinary Members—Mr. David Dunbar, Writing Teacher; Mr. Murray, Editor of *Herald*; Mr. J. H. M'Gowan, Writer, Dumfries; Mr. Alexander Fraser, Architect, Dumfries; Lord Henry Scott, M.P., Dalkeith; Rev. Mr. Crombie, Manse, Penpont; Rev. Mr. Donaldson, Manse, Kirkconnell, Sanquhar; Mr. John Lorimer, Advocate; Mr. Thos. Johnston Carlyle, Waterbeck, Ecclefechan.

Honorary Members—Sir Walter C. Trevelyan, Bart., Newcastle-on-Tyne; Mr. William Carruthers, Botanical Department, British Museum; Edward Crisp, M.D., London; Mr. Wm. Sanders, Clifton; Mr. John Stewart, Secretary to the Antiquarian Society, Edinburgh; Mr. Thomas Grindley, Laxey, Isle of Man.

The Secretary read an Abstract of the Proceedings of the past Session.

The Report of the Committee of Management preparatory of the Meeting was then taken up.

On the motion of Mr. Aird, seconded by M. Corrie, the thanks of the Society were tendered to the gentlemen of the Dumfries and Galloway Club for their kindness in allowing the apartment in which the Meeting was held to be occupied by them for the purposes of the Society.

As Sir Wm. Jardine had consented, at the request of the Society, to accept the office of President for another session, it was proposed by Mr. Starke, and seconded by Mr. Corrie, that the then Vice-Presidents, who according to rule ought to retire, should also continue in office during the session. This was unanimously agreed to.

Dr. Kerr, Buccleuch Street, was appointed Joint Secretary, in room of Mr. M'Ilraith.

It was proposed that the following gentlemen should be appointed Members of Committee, in the room of the three Members retiring in the order of rotation, viz.—

Mr. MAXWELL, Breoch.

Mr. DUDGEON, Cargen.

Mr. M'ILRAITH.

On the motion of Dr. Gilchrist, seconded by Mr. Starke, a vote of thanks was given to Sir Wm. Jardine, for his kindness in accepting office for another year.

As the First Tuesday of the Month had been found in many respects inconvenient for the Summer Excursions of the Society, it was suggested by the Committee that the First Thursday or Friday of the Month should be adopted instead, but that no alteration should be made as regards the Winter Meetings. After some discussion, Thursday was agreed to, and the change ordered to be made in the Printed Rules of the Society.

The Committee suggested that a Circular, embodying the

Minute of the Society of May 3d, with reference to the distribution of the Journal, should be printed and sent to the Ordinary and Corresponding Members (who are entitled to the Journal at a reduced price), with the view of increasing the income of the Society so far as regards this source. Mr. Gibson, Mr. Corrie, and the Secretaries were appointed a Committee for this purpose.

The Treasurer submitted an Abstract of the Income and Expenditure of the Society during the past year, which was ordered to be published in the Journal of the Society.

Dr. Gilchrist submitted a Form of Memorial to the Government respecting the Law of Treasure Trove, which had been forwarded to him by the Secretary of the Montrose Natural History Society for consideration. The subject was referred to a Committee of the Society, consisting of Mr. Maxwell, Breoch ; Dr. Grierson, Thornhill ; Dr. Gilchrist, Crichton Institution ; Mr. Starke, Troqueer Holm ; Mr. Thorburn, Writer ; Mr. Simpson, Writer. Mr. Maxwell, Convener.

Dr. Gilchrist also submitted a communication from the Secretary of the Antiquarian Society of Denmark, with reference to its intercommunication with this and other Societies, which was referred to the above-named Committee.

This concluded the business of the evening.

The following objects were laid upon the table, and submitted to the Society for conversation and discussion :—

1. A Collection of Plants of the District, forming the first contribution to the Herbarium of the Society. By Mr. Hogg, Draper.

2. Two Gold Rose Nobles of the Reign of Edward III. By Mr. Gibson.

3. Coin of the time of Vespasian, from the Collection of Sir W. Scott.

An Image cut in Steatite, found in Lochar Moss. Mr. Gibson.

A specimen of the *Carex Curta*, found growing on the road to Mountainhall. By Mr. Aird.

Dr. Grierson, Thornhill, made some remarks, and exhibited some of the properties of the new Metal Magnesium.

It was intimated that Sir Wm. Jardine would read the Presidential Address at the next Meeting.

The Society then adjourned.

December 6th, 1864.

The Society held the Second Meeting of the Session in the Assembly Street Club Rooms,

SIR WM. JARDINE, Bart., in the Chair.

The Minutes of the last Meeting were read. The Committee appointed to consider the subject of Treasure Trove reported that, after discussing the question, they had resolved to hear the remarks of the President in his Presidential Address, and to adjourn the meeting to another occasion.

Sir Wm. Jardine read the Presidential Address, which consisted principally of a review of the proceedings of the past session. The Excursions of the Society were particularly alluded to, and opportunity taken of noticing the objects of Natural History or Antiquarian interest,—which might be regarded as the discoveries, and, so to speak, the property of the Society,—made during these excursions. On the motion of Mr. M'Diarmid, a vote of thanks was heartily accorded.

Mr. T. Aird read a paper on some observations which he had made during the year on the Wild Birds in the immediate neighbourhood of Mountainhall, a mile east from Dumfries.

Mr. Starke then read a paper upon Sir Christopher Seton and the Chapel dedicated to him, and built upon the site of the present Chapel of St. Mary's, Dumfries.

Donation—Transactions of the Edinburgh Botanical Society. By the Society.

January 3d, 1865.

The Society held the Third Meeting of the Session in the Assembly Street Club Rooms,

Dr GILCHRIST in the Chair.

The following New Members were enrolled :—Ordinary Members.—Mr John Morrin, Castle Street ; Colonel Clark Kennedy, Knockgray, Galloway ; Col. Maxwell, Portrack, Holywood ; Mr. Smith, Netherholm, Kirkmahoe ; Miss Jardine, Jardine Hall ; Mrs. Dudgeon, Cargen ; Rev. Mr. Dudgeon, Free Church Manse, Dalbeattie ; Major Bowden, Lochfield.

Corresponding Members.—Mr. Clark, Curator of Royal Botanic Gardens, Glasgow ; Rev. G. J. Duncan, Portman Square, London ; Mrs. Duncan, Do. ; J. A. Knipe, Moorville, Carlisle.

Mr. Dudgeon, Cargen, read a paper upon the minerals found in the granites of the district. He remarked that crystals of the mineral sphene, which was not a common mineral in Great Britain, and but sparingly distributed in granites or rather syenites of this district, had been found by him in patches in such quantities as almost to form a constituent of the rock. The mineral zircon had been mentioned in some books on mineralogy as being found in the syenite of the district, but this he thought a mistake, which had probably arisen from the peculiar form of some of the crystals of sphene, which, when superficially examined, had much the appearance of crystals of zircon. In company with Professor Heddle, he had also found crystals of allanite, a mineral containing the rare metal cerium, and in the same locality, viz., about a mile up the Newabbey Burn, some small granular masses of a vitreous mineral supposed to be gadolonite.

A paper was read by Dr. Gilchrist, from a corresponding member, Mr. Grindley of Laxey, on some remarkable Geologi-

cal features observable in the Isle of Man. The paper was accompanied by illustrative specimens. On the motion of Mr. Dudgeon, seconded by Mr. Aird, a vote of thanks was given to Mr. Grindley for his interesting communication.

Dr. Grierson of Thornhill read a communication on a species of Vole, the *Arvicola Agrestis*, which is at present committing great ravages on the plantations of the Drumlanrig estate. Dr. Grierson pointed out that the indiscriminate destruction of the weasels and birds of prey has allowed the voles to usurp supremacy, and without check lay waste the woods and forests. Other species of Voles were exhibited and described, one of which was considered to be new.

Dr. Gilchrist exhibited specimens of Claystone Porphyry from Goldielea hills, and Ripple Markings from Edgerton, Kirkcudbright; also a rare kind of Lichen, the *Peltigera Polydactyla*, found in Longwood; and *Peizeia Coccernea*, found in Goldielea wood. He also made some observations on the habits and colour of lichens as determined by the nature of the rocks upon which they are found. Dr. Dickson exhibited specimens of Apple Blossom, indicating the openness of the season. Mr. Coupland showed specimens of Photo-Lithographic Printing of a few pages of Shakspeare, from an old type of the play of "As You Like it." This concluded the business of the evening, and the meeting adjourned.

Donation—Transactions of the Nova Scotia Institute.

February 7th, 1865.

The Fourth Meeting of the Session was held in the Society's Room, Assembly Street,

SIR WM. JARDINE, Bart., in the Chair.

The following New Members were enrolled :—Ordinary

Members—Rev. Alex. Symington, Dumfries ; Mr. J. L. Pike, Dentist, Dumfries.

Corresponding Members—Dr. John Shand, junr., Kirkcudbright ; Rev. Mr. Smith, Penrith.

The Chairman intimated that he had sent a copy of the Journal and Transactions to the Royal Society of Antiquaries, Copenhagen, and had received a reply, which he read. The Secretary of that Society described the aims and objects which they had in view, and congratulated the Dumfries Society on the commencement which they had made in a similar direction. In furtherance of their mutual interests he invited an exchange of their Transactions. The Chairman intimated that he had also sent copies to the Institute of Natural Science, Halifax, Nova Scotia, from which he had received a very interesting communication in reply, along with the recent volume of the Transactions.

After some remarks regarding the Tree found recently in Lochar Moss, with reference to which a letter from Professor Harkness, Cork, was read, the Chairman proceeded to call the attention of the Society to the subject of his communication, which was the first on the programme of the proceedings of the evening. It was the occurrence of a very rare bird, the Roller (*Coracias Garrula*), in this district. Of this bird, which is a native of the southern and eastern parts of the Old World, Sir William exhibited a series of the most characteristic species. Very few specimens (about nine or ten in all) had ever been seen in this country. One (which was among the collection exhibited) was caught as far north as Shetland, and one or two in Northumberland. Some time ago, viz., October, 1864, he got notice of an unknown bird having been observed near Bankhead, Tinwald ; and shortly afterwards it was found lying dead and partially decayed. When he sent for its remains he only got some feathers of the wings and tail, which he now exhibited. These were sufficient, however, to prove its identity. In the two instances in which the bird had been found in Northumberland they were also dead. He had no doubt that they had been

driven north by stress of weather, as was most probable in the present instance also.

The next paper, Geological Notes of the Summer Excursions, was read by Dr. Gilchrist. Among other details, Dr. Gilchrist alluded to the eruption of trap through the sandstones to the east of Wardlaw Hill, and it was suggested by Mr. Dudgeon that the trap dyke at the Sawmill at Mabie might be a continuation of this.

Dr. Grierson, Thornhill, then reported on some further researches he had been making into the history of the *Arvicola* or Vole, on which he read a paper at the previous meeting. It appeared that the two species (one of which he had supposed to be rare in the district), were alike common; but he thought he had detected a third species, which he would make the subject of a separate paper on some future occasion. Dr. Grierson also exhibited a monstrosity—the skeleton of a pig's foot which had five instead of the usual number of four bones.

Mr. Dudgeon made a brief communication regarding certain markings in Sandstone formed by the decomposition of Iron Pyrites, and exhibited specimens which tended to prove that these markings must have been formed at the time of the deposition of the sand. Mr. Clarke remarked that at King's Quarry sandstone containing these markings was found in situ in abundance.

Dr. Gilchrist exhibited some beautiful collections of Mosses, Lichens, and Algæ, and presented the Society with a small herbarium of lichens, all of which were gathered within the walls of the Crichton Institution.

This concluded the business of the evening, and the meeting then adjourned.

March 7th, 1865.

The Fifth Meeting of the Session was held in the Assembly Street Club-house,

SIR WM. JARDINE, Bart., in the Chair.

With reference to the paper read by Dr. Gilchrist at last meeting, and the suggestion by Mr. Dudgeon that the trap dyke at Mabie might be a continuation of that seen to the east of the Wardlaw Hill, Mr. Dudgeon stated that in company with Dr. Gilchrist he had examined the Mabie dyke, and found that it corresponded precisely with that at Wardlaw, both as regarded the nature of the rock and the direction in which it tended. They had no doubt that the dyke was continuous. It was about two feet broad, and its direction was E.N.E. by W.N.W. Specimens of the trap were exhibited.

Mr. McDiarmid read a paper, compiled chiefly from extracts from the Burgh Records, showing how quackery was treated in Dumfries a century and a quarter ago.

Dr. Grierson, Thornhill, read a paper on the relics of prehistoric man found in Nithsdale, and showed several specimens of stone hammers, spear heads, axes, &c., found in the district, with diagrams of others. He expressed his opinion that the more rudely fashioned and finished had a local origin, as being the work of the ancient natives of Nithsdale, while those of a higher and more finished character had been introduced by an immigrant and foreign tribe. He further argued that from the localities and circumstances in which these implements were found certain conclusions might be drawn as to the mode of sepulture practised by the native and foreign tribes,—that while the custom of the natives was to bury their dead under mounds and cairns, the mode practised by the foreign tribes was to burn their dead previous to burial. The reading of Mr. Crisp's paper on the anatomy and habits of the Spoonbill was adjourned, owing to the lateness of the evening. Mr. Aird presented to the Society a pamphlet by Mr. Fergusson, Q.C., on the Ogham Inscriptions, and read a letter from that gentleman with reference to the probability of similar inscriptions being found in Nithsdale, the ancient Strathclyde. Sir Wm. Jardine presented to the Society the first two parts

of Vol. V. of the Berwickshire Natural History Club, and directed the attention of the members to the paper by Mr. Tait, "On Ancient Sculptured Rocks," and to the importance of the subject of sepulchral remains.

Mr. Underwood presented to the Society a stone hammer found in the parish of Irongray.

Mr. Hastings, bird-stuffer, exhibited a specimen of a hermaphrodite black grouse (*Tetrao tetrrix*).

This concluded the business of the meeting.

April 4th, 1865.

The Sixth Meeting of the Session was held in the Assembly Street Club Room,

SIR WM. JARDINE, Bart., in the Chair.

The following new members were enrolled :—Ordinary—Mr. Murray, manufacturer ; Mrs. Walter Scott, Castle Street ; Mrs. Witham, Kirkconnell ; Mr. Wright, merchant, Dumfries.

Corresponding—F. F. Abby, Huddersfield.

Mr. M'Diarmid presented to the library of the society a copy of his pamphlet upon "The Established Churches of Dumfries ;" and Mr. Thorburn, Barnkin, to the museum a granite ball found in Lochar Moss. Mr. Starke then read a paper upon "The Nun Slab at Dundrennan Abbey," the object of which was to show that the said stone or slab marked the resting place of the last prioress of Lincluden before the change of that Abbey into a college, and that the abbreviated and partially obliterated epitaph inscribed upon it might reasonably be conjectured to relate to that lady.

Dr. Dickson, Secretary, read a communication upon certain markings, described as hollows or cups, upon the Stones of the Druid's Circle at Holywood, and directed the attention of the Society to the resemblance which they bore to the hollows or cups frequently found upon similar stones

and circles of stones either alone or along with encised circles and other markings, and regarded by antiquarians as undoubtedly artificial and symbolical.

Dr. Gilchrist read an elaborate paper upon Ancient Sea Beaches, intended as a preliminary paper to an investigation and report of the Ancient Sea Beaches of the Nith.

This concluded the business of the evening.

May 2d, 1865.

The Seventh and Last Meeting of the Session was held in the Society's Rooms,

DR GILCHRIST, Vice-President, in the Chair.

It was intimated that in a Meeting of Committee held in a previous part of the evening,

Mr Dudgeon proposed, seconded by Mr M'Ilwraith, that the First Excursion of the Society should be to Ecclefechan and the immediate neighbourhood, including Birrens Camp, Birrens Wark, &c. This was agreed to.

The following New Members were Enrolled :—Ordinary—Mr Moriarty, Scottish Borderers Militia ; Sir William Broun, Bart. ; Rev. W. Laidlaw, Wanlockhead.

Corresponding—Mr Robert Dinwiddie, Merchant, New York ; Mr W. S. Davidson, Hammond Street, New York.

Dr Dickson mentioned that he had observed upon a stone, called the Grey Stone, about a mile from Dumfries, four depressions or cups similar to some of those which he had described at last meeting as existing on the stones of the Holywood Circle. This stone is one of a circle which formerly existed, and which circle some of the older inhabitants of Dumfries remember and describe as composed of a number of large blocks of whin.

Mr. M'Diarmid read a short sketch of the Lady Devorgilla, the mother of John Baliol, King of Scotland, founder

of Sweetheart Abbey, and builder of the Old Bridge over the Nith at Dumfries.

The Secretary read a paper contributed by Mr Crisp, Chelsea, on the Anatomy and Habits of the Spoonbill (*Platalea Leucorodia*). This paper contained the result of a very minute anatomical examination of the bird, one of the principal peculiarities of which is the strangely convoluted trachea, generally found in the female, of which a diagram was exhibited.

Dr Gilchrist then read a short paper in continuation of his researches on the Ancient Sea Beaches of the Nith Valley. His attention had been confined to the terrace which was seen commencing on the left bank of the Nith, immediately below the caul at Dumfries. The corresponding terrace on the other side was that which formed St. Michael Street. He was of opinion that those terraces were of marine origin, as he had certain information that marine shells had been discovered in the soil near the brickworks at the shooting range. He was still in the midst of his researches, and would communicate the result from time to time to the Society.

Dr Gilchrist also exhibited Fossils from the Silurian at Dunscore. In one there was a circular marking that reminded him of the markings noticed in a paper which had recently been sent them from the Isle of Man. He had also been supplied by Mr Cordiner of Fraserford with a specimen of the Graptolite Fossil found in the Silurian near Dunscore, which was the first time, he believed, that they had been found there, although abounding in the Valley of the Moffat Water.

A lengthened paper on the Fireclay of Edinburgh, contributed by Mr Marshall, was presented, but was only partially read, owing to the lateness of the hour.

Dr Grierson, Thornhill, exhibited some Skeletons of Monstrosities in Lambs. Among them was a lamb with a double body and a single head from Holestane. In the digestive system of this specimen it was noticed that the

first stomach was double, but the second and the smaller intestines were single, after which the canal separated and terminated doubly. Another specimen had its eyes within the skull, and was stated by Dr Grierson to be unique so far as he knew. He also exhibited the skeleton of a lamb with a curious and abnormal shortening of the lower jaw, and one without limbs. The latter was sent from the farm of Mitchelslacks. Dr Grierson mentioned that he had in his possession a kitten with two heads which lived for some time.

Mr Heron, Duncow, exhibited some relics and natural curiosities which he had picked up on the Isle of Heston, viz., a small cannon ball of iron, a brass eagle of French origin,—probably a military symbol, and some curiously worn stones.

Mr William Lennon, Crichton Institution, showed specimens of larva of *Cleora Lichenaria*; also of *Persicallia Lyringaria*.

Dr Grierson, Thornhill, exhibited two specimens of muslin of very fine texture, made from the leaves of the pine apple, —from the Island of Penang.

This closed the business of the evening and of the winter session. It was arranged that the first Field Meeting should be on the 1st of the following month, to visit the Camp of Birrens, &c.

LIST OF MEMBERS

OF THE

*Dumfriesshire & Galloway Natural History
and Antiquarian Society.*

SESSION 1864-65.

November 1st, 1864.

ORDINARY MEMBERS.

Mr. DAVID DUNBAR, Writing Teacher.
Mr. MURRAY, Editor of *Herald*.
Mr. J. H. M'GOWAN, Writer, Dumfries.
Mr. ALEXANDER FRASER, Architect, Dumfries.
Lord HENRY SCOTT, M.P., Dalkeith.
Rev. Mr. CROMBIE, Manse, Penpont.
Rev. Mr. DONALDSON, Manse, Kirkconnell, Sanquhar.
Mr. JOHN LORIMER, Advocate.
Mr. T. JOHNSTON CARLYLE, Waterbeck, Ecclefechan.

HONORARY MEMBERS.

Sir W. C. TREVELYAN, Bart., Newcastle-on-Tyne.
Mr. WILLIAM CARRUTHERS, Botanical Department,
British Museum.
EDWARD CRISP, M.D., London.
Mr. WM. SANDERS, Clifton.

Mr JOHN STEWART, Secretary to the Antiquarian
Society, Edinburgh.

Mr. THOS. GRINDLEY, Laxey, Isle of Man.

January 3d, 1865.

ORDINARY MEMBERS.

Mr. JOHN MORRIN, Castle Street.

Colonel CLARK KENNEDY, Knockgray, Galloway.

Colonel MAXWELL, Portrack, Holywood.

Mr. SMITH, Netherholm, Kirkmahoe.

Miss JARDINE, Jardine Hall.

Mrs. DUDGEON, Cargen.

Rev. Mr. DUDGEON, Free Church Manse, Dalbeattie.

Major BOWDEN, Lochfield.

CORRESPONDING MEMBERS.

Mr. CLARK, Curator of Royal Botanic Gardens,
Glasgow.

Rev. G. J. DUNCAN, Portman Square, London.

Mrs. DUNCAN, Do.

J. A. KNIPE, Moorville, Carlisle.

February 7th, 1865.

ORDINARY MEMBERS.

Rev. ALEX. SYMINGTON, Dumfries.

Mr. J. L. PIKE, Dentist, Dumfries.

CORRESPONDING MEMBERS.

Dr. JOHN SHAND, junr., Kirkcudbright.

Rev. Mr. SMITH, Penrith.

*List of Members.**April 4th, 1865.*

ORDINARY MEMBERS.

Mr. MURRAY, Manufacturer.
Mrs. WALTER SCOTT, Castle Street.
Mrs. WITHAM, Kirkconnell.
Mr. WRIGHT, Merchant, Dumfries.

CORRESPONDING MEMBER.

F. F. ABBY, Huddersfield.

May 2d, 1865.

ORDINARY MEMBERS.

Mr. MORIARTY, Scottish Borderers Militia.
Sir WILLIAM BROUN, Bart.
Rev. W. LAIDLAW, Wanlockhead.

CORRESPONDING MEMBERS.

Mr. ROBERT DINWIDDIE, Merchant, New York.
Mr. W. S. DAVIDSON, Hammond Street, New York.

DUMFRIESHIRE AND GALLOWAY NATURAL HISTORY AND ANTIQUARIAN SOCIETY,

In account with W. GEO. GIBSON, Treasurer.

<i>Dr.</i>		<i>Cr.</i>	
1864-5.	Secretary's Outlays for Stamps, Excursion } Expences, etc.	£5 12	8½
	Mr Maxwell, Joiner, for Case for Museum	11 13	6½
	Courier Office, for Printing,	1 11	6
	Mr Johnston, Printer's Account	1 15	6
	Messrs Anderson and Son, for Stationery	1 15	6
	Mr Hastings, for Stuffing Shark	0 10	0
	Mr Blaylock, for delivering Circulars	0 12	0
	Mr Douglas, for Attendance	1 0	0*
	Do., for removing Books, etc.	0 5	0
	Arrears of Subscriptions for 1864-5, 28 at 5s.	7 0	0
	Cash in Treasurer's hands	2 1	5
		£33 17	2
1864-5.		By Balance on hand from last year	£6 17 2
		By Cash arrears unpaid for 1863-4	1 0 0
		By Subscriptions of 100 Members at 5s.	25 0 0
		Donation from Robt. Dinwiddie, Esq., New York	1 0 0
		}	
		£33 17 2	

ADDRESS OF THE PRESIDENT,

SIR W. JARDINE. BART., LL.D., F.R.S., F.L.S.,

ETC. ETC. ETC.

8th December, 1865.

GENTLEMEN,—I have the honor again to address you, and for the third time to report the proceedings of our last Summer Session and Excursions.

The first summer excursion for the past year was fixed to meet at Ecclefechan Station, to examine Birrens Werk Hill, but from some cause that meeting was not well attended, and no report was sent in.

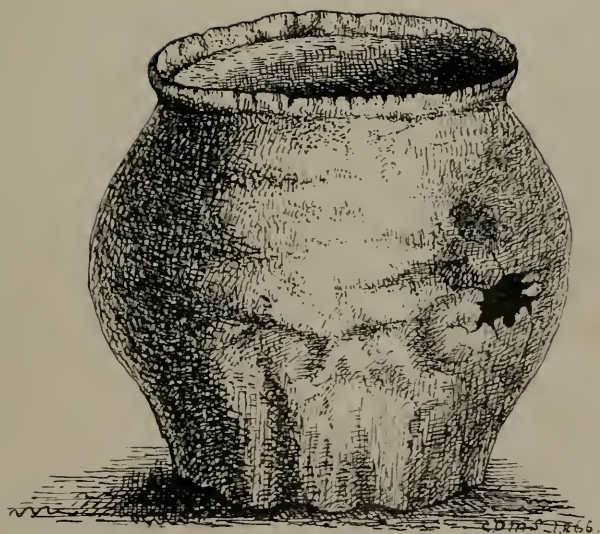
On the second excursion (6th June), the party met at Dalbeattie Station, with the more special purpose of examining some lochs in Colvend in which the remains of crannogs were said to be found, and proceeded at once by omnibus to a loch near Clonyard.

Barean Loch, of considerable extent and very irregular form, has now a small island situate near its south end. The surface of this had been recently laid bare, the water of the loch having been lowered by draining; previous to that, and only in dry summers, a stone or two could be seen above water. At the time this island was examined by the members of the Society it was 23 feet 6 inches in diameter from E. to W., 24 feet from N. to S. It has a peaty soil, but upon this there is a flooring of oak slabs, which are laid in

E.N.E. and W.S.W. directions. Upon this flooring a covering of decayed vegetable matter has gradually accumulated and formed a soil, which supports bushes of alder, willow, thorn, &c., with an undergrowth of marsh plants. Around the island were perceived oak piles, and on examination these were found to have been sharpened by a metal tool, and were driven from $3\frac{1}{2}$ to 4 feet into the peaty bottom of the loch. The portions below or in the peat soil were very little changed, and shewed distinctly the tool markings where they had been sharpened or chipped; but the parts above the peat, though submerged and in the water, were very much decomposed, the outside, or "whitewood," rotting and crumbling away. None of those piles were visible above the water. On this oak piling beams had been laid horizontally, some of oak, some of fir still retaining the bark on the under sides. Between the oak piling and the island there is an area, varying from about 5 to 8 feet wide, filled with angular blocks of granite, apparently, with the piles, to assist in protecting the slab flooring. No remains of any kind were seen, but, before the loch was lowered, two copper pots were found upon the margin of what is now the island. One has been lost sight of, but the other is now in the possession of Mr Lowden of Clonyard, who obligingly lent it, and the accompanying figure, reduced to one-half the size, will shew the form and proportions.

From Clonyard the party crossed the country to White Loch. The water of this has lately been much lowered, and has exposed many parts of the bottom, covered with *debris* of granite of considerable size, and comprising also some large boulders, which rendered it very rugged. There appeared to be no traces whatever of crannogs or artificial buildings in or upon the shores of this loch.

The Society was hospitably entertained at Colvend Manse, which adjoins White Loch, by the Rev. Mr. Fraser, a very efficient member; and, in returning to the train, a party stopped to examine the large granite quarries opened on the Munches estate, close by the Water of Urr, by the contractor for



*Berean Loch, Clonyard, Colvend.
Kirkcudbright.
red. $\frac{1}{2}$.*



the Thames embankment. Another party, as a deputation, waited upon Mr. and Miss Lowden at Clonyard, to thank them for their attention, and the use of a boat to explore the island upon the loch.

The day was close and sultry, and for a long time a drizzly rain fell, which prevented the thick natural cover fringing Barean Loch to be carefully searched, and few insects were taken. *Hipp. semele* was abundant in the open spaces among the granite rocks.

Among the less frequent plants *Typha angustifolia* was noticed, and *Drosera longifolia* was seen in great abundance by the sides of the loch, as well as very luxuriant specimens of the common *D. rotundifolia*, both growing separately, but *D. anglica* did not occur at all there, nor was it seen during the excursion. *Habenaria bifolia*, *Lysimachia vulgaris*, *Corydallis claviculata*, *Veronica polita* (auct. Fraser), *Alisma ranunculoides*, *Genista tinctoria*, *Lobelia dortmanna*, *Helosciadium inundatum*, *Isoetes lacustris*, were all picked. The two water lilies, *Nymphaea* and *Nuphar*, were in great beauty and luxuriance in the lochs.

The third excursion for the season was arranged to be in the vicinity of Sanquhar, a field of great antiquarian and geological interest, as well as affording a wide range to the botanist and entomologist. But the object of principal interest was to be the examination of the Black Loch, on the property of the burgh of Sanquhar, and in which there was a small island, believed to be the foundation of another crannog. On communicating with the Provost and authorities of the burgh, the Society met with every facility to make their examinations. They were also greatly assisted in planning the excursion and in their operations by the Rev. Robert Simpson, D.D., author of a History of Sanquhar, &c.

The Sanquhar or Black Loch is a small sheet of water situate in the town-common of Sanquhar. It is of considerable depth, and now covers about two acres. At the north end of this there is a small island, covered with a rank vege-

tation of grasses, carices, &c., mixed with a few plants of *Epilobium angustifolium*, and there are also a few stunted trees of Scotch fir and birch. At the north or north-east end there is a natural outlet from the loch through the moss, which could be easily deepened. Some years since a man had been drowned, and, the body not being recovered, advantage was taken of this outlet to lower the water, which, while it discovered the body of the man, at the same time revealed indications of a passage to the island, and some beams and driven piles, together with a large wooden canoe. These facts being mentioned to some of the members of the Society induced them to propose this excursion to the Sanquhar loch, and to endeavour to examine the island.

The Rev. Dr. Simpson, with the sanction of the authorities, the day before the meeting employed labourers to open and deepen the outfall formerly used, which was done so successfully that the loch was drained except a small pool, and the bottom laid bare all around the island. The extent of the surface of the island available above water was 49 feet from E. to W. by 40 feet from N. to S. It would stand from 6 or 8 feet above the exposed bottom of the loch, and the sides being sloped, the base was considerably wider than the dimensions above given. When first seen after the bottom was laid dry, a few upright piles were observed, and the curving narrow passage from the mainland appeared somewhat raised, and was hard below the immediate mud deposit, as if a sort of rough causeway had been formed; and when the water was at its height, or nearly level with the surface of the island, persons acquainted with the turn or winding of the passage could wade to it. The base of the slope of the island was laid or strengthened with stones, some of considerable size, so placed as to protect the wooden structure. Round the island could be seen driven piles, to which were attached strong transverse beams, and upon making a cut six or seven feet wide into the side of the island to ascertain its structure, we found a platform of about four feet in depth raised by transverse beams placed alter-





*Section of Crannoge,
Black Loch, Sanguhar.*

nately across each other, and kept in position by driven piles. These last were generally self oak trees, but dressed and sharpened by a metal tool, some of them morticed at the heads where a transverse rail or beam could be fixed. The transverse beams, of various sizes, were chiefly of birch wood. Mr. Simpson informs me that the cut has since been made quite through the island, and that the structure continues the same. It is therefore very similar to that of some of the smaller Irish crannogs, only that in the latter the platform was frequently formed of stones. The wooden platform rested upon a hard foundation, either the natural subsoil in the loch or quarry refuse. The mud prevented this being ascertained correctly, but it was most probably the former, as the hard subsoil was soon struck when deepening the outfall. On the top of the wooden platform was a layer, of from 12 to 18 inches thick, of, apparently, chips or the *debris* from some neighbouring quarry of white or grey sandstone, upon which the vegetable mould now supporting the rank vegetation had accumulated. On the surface of the island there were some indications of building, but on examination these were found to be only the erection of curlers for fire or the protection of their channel-stones when not in use. No remains of any kind were found on the island nor around it, but, except on the passage from the mainland, the mud was so deep and soft as to prevent effectual search. Neither have we any record of any other remains being found in or near the loch except the canoe already alluded to. It is formed out of a single oak tree, 16 feet in length by 3 feet broad at the widest part, at the prow only 1 foot 10 inches. It is at present laying exposed to weather, and for protection a coating of pitch was lately given to it. It will thus ere long decay and be lost. The burgh of Sanquhar should endeavour to protect their curious and valuable relic. It would easily sling from the roof of one of the public rooms.

Around the loch the ordinary marsh plants were found—*Menyanthes trifoliata*, very small. On the island, *Epi-*

lobium angustifolium, probably introduced. But the plant of special interest was the little yellow water lily, *Nuphar kalmiana*, a plant very local in Scotland, Watson giving only the counties Lanark, Argyle, Elgin, Inverness, and we may now add Dumfries. This plant is considered identical with that of the North American species, which had been named after Kalm ; *minima* and *pumila* are synonyms, the latter most generally adopted. The day was dry with a strong gale of wind, and the bottom of the loch on the top of the mud appeared as spread over with a pale covering. This was blanched plants of *Hypnum fluitans*, which sunk to the bottom when the water was withdrawn. Extremely little moluscos life appeared.

Towards evening the party divided,—the one to inspect some graves near a reputed old battlefield, but which time did not allow them to examine thoroughly : the other sought the Crawick Water to see the junction of the old rocks with the carboniferous series, which is well seen close to the old mill, and also the stratification of the latter, of which several good and interesting sections are presented, very fossiliferous, but here specimens are very difficult to procure entire. The members again met together at the ruins of Sanquhar Castle, which they examined under the guidance of Dr. Simpson, and I cannot do better than refer our members to the excellent little work of the Rev. Doctor, "*History of Sanquhar.*"

Several ladies, both members and visitors, attended, and took great interest in the exploration of the Black Loch crannog ; and when the members separated there, they made an excursion (on their own account) up the Euchar (ythan) Water, and brought in specimens of *Campanula latifolia*, which grew plentifully in several hollows of the glen, and also *Vicia orobus* in seed, abundant here, but by no means a common plant in the county. This glen alone would well repay an examination, and there is a full day's work in it, zoological, botanical, geological, and antiquarian. The members, having left the castle and inspected and measured the Black Loch canoe, dined a large party at the Queensberry

Arms. Many invited visitors attended. Dr. Simpson read an interesting sketch of the antiquities around Sanquhar, and the subjects of the day's excursion were discussed, until train time called off each to seek their respective homes.

The next expedition, being the turn of Galloway, was fixed for the Creetown district, Mr. M'Diarmid having undertaken to lead the party.

The general rendezvous of the members was at Dalbeattie, whence they proceeded by the Portpatrick Rail to the station at Creetown, where the excursion may be said to commence. Having gained the shore road, the party proceeded to examine the granite quarries, which supply the principal amount of stone used for the Liverpool docks. These quarries are situate close to the public road, and have a run or tramway to an embarking stage on the shore. On descending from the Creetown Station to the sea level, we perceive on the land or left side, looking seaward, large terraces running in a line with the estuary or firth. It is through one of these that the entrance to the quarries has been cut, exposing its structure above the granite, which stands in nearly erect beds, the tops of which have the appearance of being rounded off. The rock itself is of a grey colour, and is not so pure a syenite as that of Munches, but, nevertheless, it produces fine blocks of a very large size. The covering of the quarries is a very irregularly-sized drift, the parts of it laying in all directions, without arrangement, quite unrolled, and with sharp, square, or angular surfaces. This is well worthy of closer examination, as well as the wide terraces which could be traced skirting the road until they became concealed by the woods which cover them as Carsluith tollbar is approached.

Along the shore *Aster tripolium* was abundant, also, *Arenaria marina*; *Statice limonium*, not abundant. These were on the muddy banks. By the roadside *Agrimonia eupatoria* was common, and some patches of *Innula crithmoides* occur. East of the tollbar we pass a very neat

cottage, where considerable pains had been taken with the garden and flowers. At this time it was quite gay, and the mildness of the climate was marked by very large fuschias, in front and at the sides, in full flower, and which had not been in the least cut last winter. A *Lycesteria formosa* was above 10 feet high, and there were large plants of *Lavatera arborea* which had flowered luxuriantly, while thriving young ones were strong and healthy, and ready to take their place next year. We could not ascertain where these plants had been obtained, or that they were native to any part of the coast. A little further on was Carseluth Castle, an old square fortress, built upon the edge of a terrace to the base of which the tide has once flowed. This must have been in olden time a very strong keep. At present it is neglected, the walls covered with *Asplenium ruta muraria*. There is a carving above the fireplace of the principal room. The farm-steading, placed too near, interferes sadly with the old structure, and is in the way of any good sketch or photograph being taken. The farm dwelling-house is approached by a fuschia hedge 10 feet high.

Proceeding onwards to Ravenshall, where refreshments were expected, we met Mr Hannah of Kirkdale, who gave us information as to our best route to the farm of Cairn Holly, with the cairns and standing stones there.

While refreshments were preparing for us at Ravenshall the party went to the shore, a few hundred yards distant, here very precipitous and rocky, and fashioned into arches and caves. To one of the latter has been given the name of Meg Merilies' Cave, but with what propriety it is needless now to enquire. The rocks themselves are silurian, and are very remarkable from the twisted and contorted state of the beds. They afforded *Crithmum maritimum*, *Asplenium adiantum nigrum*, and *marinum*, and at an earlier period of the season would be very gay with *Geranium sanguineum*, and the usual rock plants of the coast.

On regaining Ravenshall we found Mr Hannah had

come down to lend his assistance. That gentleman joined the party at lunch,—a very excellent one, thanks to mine host of Ravenshall. It consisted of fish, joints of various kinds, game, sweets, &c. Our dining room, a long, open but covered arbour in the garden, where we looked out upon the sea, the opposite side of the Bay of Wigtown, and Isle of Man,—a splendid view.

Refreshed, we started, under Mr Hannah's guidance, a short way through the woods to Barholm Castle,—an easy way to those who know it, rather tangled to those who do not. The wood consisted chiefly of oak copse composed of both species of oak, *Q. robur* and *sessiliflora*. The latter is by no means common in Scotland, but was here in nearly equal proportion, and was easily distinguished among the stock shoots both by its general aspect and by its lessile fruit.* Barholm Castle is nearly of the same plan as Carsluith, and is in rather better repair. The front door or entrance is ornamented by the rope moulding knotted at the two ends. Here the farm steading is also too near, in one part even attached, and close to the garden, some of the walls of which seem old. Instead of *Asplenium ruta muraria* which covered Carsluith we have a luxuriant crop of *Asp. trichomanis* on the castle and old garden walls. The garden in front of Barholm farm-house also bespoke the mildness of the climate; large fuschias were again seen in full flower, and *Wigelia rosea* stood eight feet high.

Leaving Barholm we crossed the country to Cairn Holly Farm, where the Galwegian King Galdus is supposed to have been buried. Of the fact there are various opinions and assertions. Here, in front of Cairn Holly stead-ing, there has been a covered stone kist or grave surrounded by long standing slabs. It is stated that this kist had been long since opened, and on examination no doubt it had been so, and nothing was found or seen to induce any prolonged stay. Below the farm in the valley near to the

* Professor Babington says "He has failed to learn how to distinguish them." Sir W. J. Hooker keeps them distinct.

burn there are several mounds having an artificial appearance, which would probably repay examination, and at the side of the road by which Cairn Holly is approached at the corner of one of the fields there are eight or nine standing slabs besides prostrate ones upon a rough mound which appears a likely spot to dig around. The day being far advanced, however, we were obliged to return to Ravenshall, where our omnibus waited. By the side of the road from Kirkdale Bridge there was *Sedum reflexum* upon the top of the walls. This may have escaped from a garden.*

While the omnibus was getting ready the members started to try to find a carved stone said to be near, upon the lands of Kirkclaugh, and after a search among the planted cliffs of the sea-shore we discovered what was sought for.†

Just as the party was starting Mr M'Guffog, the tenant of the farm of Kirkmuir, which adjoins Cairn Holly, came up to us with some remains which had been turned up on his farm. It was impossible to examine them properly upon the spot, and Mr M'Guffog kindly entrusted them to my care. Mr M'Diarmid undertook to make enquiries as to the exact locality and circumstances of the find, and his report is as follows :—

“The articles were found in a turnip field about a quarter of a mile distant from the old church-yard of Kirkdale by the farm servant while harrowing the land. They were wedged together as if they had been packed in and covered with till, the whole being about the size of a man's head. The teeth of the harrow broke off a bit of the ball, by

* Babington gives *S. reflexum* as Scotch with a ? . Hooker gives walls, roofs of houses, *Thatched builds*, rare ; and gives a wall on Corstorphine Hill, near Edinburgh. We found the thatched houses at Aber, in Wales, and those in Antrim, Ireland, covered with it. [Same as *S. glaucum*—Smith.]

† “This singularly rude stone at Kirkclaugh, in the parish of Anwoth, stands on a cliff overhanging the sea, near the partly artificial eminence called the “Moat of Kirkclaugh.” It is of sandstone, very rudely sculptured. The nature of the markings or lines, which are deeply cut in the surface of the slab, are sufficiently indicated in the drawing. It will be observed that the cross like figure on the east face is partly raised on the stone above the surrounding surface. It may be doubted if the present be the original site of the stone.”—Sculptured Stones, CXXIII. p. 38.

which it was seen that there was something unusual therein. The land where they were found was meadow and had been recently drained, but there was no appearance of cairns or tumuli on the ground. The whole articles were covered with till and rust, and the sculptured one with what appeared to be verdigris. All required a great deal of cleaning."

The articles thus found consisted of four axe heads, one or two of them broken, and all, as stated by Mr M'Diarmid, very much rusted and corroded. The general shape narrow. The carved article of brass is the most interesting. I took it to Edinburgh and showed it to Mr Macculloch, the curator of museum of Society of Antiquaries, who at once pronounced it to have been the handle of a Roman vessel. Age about beginning of Christian era at least.

The party proceeded by omnibus to Gatehouse-on-Fleet, skirting Wigtown Bay and banks of Fleet, and afterwards made the Kirkcudbright rail, which carried them safely to their various destinations.

The last excursion of the summer was made upon the 7th of September to Newbie. The private excursion to the same place last year had given the hope that more stone kists would be discovered. Permission had been requested from Mr Mackenzie to make explorations on the banks of the shore and raised knolls adjoining for the search of the burying places. This was at once granted, and Mr Beattie, the tenant of the land, not only gave every facility for the exploration as well as information but also permitted his men to assist in excavating and digging into the mounds supposed to contain the stone graves.

The party was unsuccessful in finding any new kists. A part of one now only exists and the history remains a little obscure. The mound in which the end of the remaining kist is seen faces the sea. The sea bank there was formerly higher and extended much farther seaward, in fact the road now along the top of the bank once ran between the bank

and the sea. The sea washed away both road, bank, and part of the mound, and so exposed the kists in the latter. The account that we collected was that there were formerly three kists all placed in line with that now partly existing, the ends pointing to the sea. They all had bones in them when discovered, but they were mixed with sand and gravel, and as the workpeople expressed it when exposed "They went to meal." The part of the kist at present standing has the sides formed of strong sandstone flags, six inches thick, placed on edge; the width inside is about two feet and the top is covered with a flag three feet broad; the depth from the cover to the lower edge of the side flags is little more than two feet. When this remaining kist was discovered there was upon the north side a small hole formed of four flags not more than a foot square and about eighteen inches deep. There was no cover upon the top and it was filled with small pieces of bone. Over these two there was a mound of loose stones as if an artificial cairn had been made over all, and there is reason to believe that this was also carried over the other graves which have now disappeared.

Upon a mound nearer Newbie House the kist opened last year remained as left. It may be remembered that on removing the covering last year pottery with herring bone pattern was found here. The form of this kist when opened was irregular; it is placed east and west, the width at the east end being two feet four inches, at the west only one foot two; but the flags—about four inches thick—appear to have been moved, and the kist most probably was originally square. The depth was about one foot ten inches, and the whole was covered by an irregularly shaped flag. Though searched for no other graves were found upon this or the adjoining mounds.

After as far as possible satisfying themselves that nothing farther would be found here, the party proceeded to the ridge at Annan Waterfoot on which the lighthouse is placed and where human bones were said to be

found. Upon making a trial human bones could be found in quantity at a very little depth below the surface. It had evidently been the site of a burying place, and as there appeared nothing of antiquarian research worthy of spending time here, those of the party who were independent of trains returned and examined the site and what yet remained of Newbie Castle, together with objects of a more recent kind,—the fine specimens of cattle, both Galloway and short-horn, feeding and preparing to be tied up, for which Mr Beattie has been so long and justly celebrated. Mr Beattie was also so kind as to induce the remaining members to partake of refreshments before they endeavoured to find the ancient forest on the shore of which the billet gave notice.

Changes are constantly going on upon a sea shore, and some 15 or 20 years ago I made a sketch of the shore nearly opposite where the kists were discovered. Beyond the coast mounds the fields had not been reclaimed or drained, and there was a moss covered with heather then existing. This moss ran under the shore mounds and upon it the trees had grown. At that time the roots stood higher above the surface than they do at present, and at low water could easily be seen at some distance above the surface. These sand hills and mounds extended at one time much farther seaward, and as we have seen a gradual encroachment has been made. On examining the shore we found roots still remaining at the edge of the shingle and seawards, and Mr Beattie is aware of their existence as far northwards as Newbie House. What we saw and uncovered were the roots of oak trees of considerable size.

Several good plants occur along the shore here, but the season was rather too far advanced for the botanist. The entomologists of the party were, however, much gratified by seeing several specimens of *Colias edusa* flitting along the sea beach herbage upon both sides of Newbie House, but in Mr Lennan's absence no one was provided with catching apparatus, and the colias proved more than a match for the hats and handkerchiefs of the most nimble members.

This butterfly, very rare in Scotland, has been taken several times about the Carse at the mouth of the Nith upon the same line of coast, but has not previously been observed so far northward.

The stake nets frequently take specimens for which they are not properly set. Birds are occasionally drowned therein : diving after fish they get into the netted houses and cannot find their way out.

The tunny, *Thynnus vulgaris*, has been taken in them ; and Mr Beattie has in his lobby the head of a swordfish, *Xiphias gladius*, which was entangled in 1852 or '53 in the net opposite the house.

I have thus run rapidly over the principal work of our summer excursions. I have omitted any antiquarian history of the old keeps or towers which almost always come in our way, both because I am not sufficiently versed in these subjects, and also that it would lead to a length of historical description and detail much beyond our time at these meetings ; and, thirdly, that we have members among us who are eminently qualified, and who, I trust, will draw up accounts, and gradually exhaust the history and legends of those interesting remains, and, assisted by the pencil or photography, we may have it in our power to illustrate them and preserve some records of what yet remain.

I have tried to impress upon our members the value of the Natural Sciences, and that antiquarian research was now so intimately connected with them that the study of both could not be separated. They must be worked hand in hand. These pursuits do not interfere with business, witness the many able men in public life who have worked much and well. They destroy superstition ; attest the power and design of the Almighty, and so draw man nearer to God ; explain popular errors, such as the belief that a horse hair if put into water will turn an eel. Many of you may have tried this, though I doubt if you succeeded. That, besides supplying a relief to the overworked mind, they may also assist

the health of the body. Lord Stanley, when lately opening the Gymnasium at Liverpool, dilated on the value and necessity even of muscular exertion for the continuing of health. The mechanical exertion of a gymnasium is a remedy, and is undoubtedly useful, especially in a large town, where getting out to the open air is impossible or at least inconvenient, but in smaller or less populous towns, where close work may be as common, a gymnasium is not always attainable. Our five summer excursions are a good substitute, and the scaling of Colvend cliffs will assist in strengthening the limbs, while a straightforward walk up Hartfell or Criffel will materially help the expansion of the chest.

The byegone season has been a remarkable one, perhaps the most so for a long period of years. The long-continued heat, accompanied by little moisture, great electricity, and a close atmosphere, has acted on both animal and vegetable structures. The condition of the atmosphere produced a want of energy, a certain lassitude, and a want of strength to resist particular affections, in fact a tendency to decomposition. Vegetation, especially where one series of plants was grown in quantity together, could not receive the usual nourishment from the lack of moisture, and was more easily exhausted by the attack of parasitic fungi, which finding weak and suitable subjects, spread and extended themselves over large areas. This was particularly apparent among the turnip and bean crops. In coming out of turnip fields with dark trousers the dress and shoes were quite white. In gardens the same was observed.*

Our district has also been visited by an unusual and extreme amount of disease among animal life. We may consider this as brought about by God as a dispensation wherewith he is pleased to try us : if so, it has been brought about by the working of natural *causes*, and not by any im-

* "*Rust (anuredo)* has been particularly abundant this year upon grass, giving sometimes a decided tint to whole fields, and covering the clothes and shoes of those who walked through it with a thick coat of orange powder."—*Gard. Chron.*, Nov. 25, 1865.

mediate interruption of *laws*. We are bound to study these causes and their variations, both as warnings and to gain the means if possible to anticipate them. This we are authorised by every means in our power to do, and in dependence on His will to try to avert these natural evils. In such seasons as the past and present, the animal frame, as well as the vegetable structure, are less able to resist those mysterious seeds of disease, which are ready to take advantage of any subject most suitable for their development and least capable of resistance; and after the indiscretion, foolhardiness, and senseless covetousness of some, with the little care that has been taken to restrain the intermixture of animals by public markets and roads, the evasion of the sanitary measures attempted to be imposed, it is not remarkable that these diseases should spread. If you will for a moment think of what we in common language call "*Scent*," no one can doubt how easily disease can be carried. See how far off in a favourable day a pointer will wind his game. See a good retriever follow the windings of a wounded bird long after it has passed. See a pack of fox hounds puzzle out a "*scent*" over the hardest road or driest ploughed land, and when a long grassy pasture is gained (the *scent* clinging to the roughness) they go away breast high with no time even to give tongue: or in a cold hoar frost the fact that an animal has passed over the ground is uncertainly and slowly indicated, but the moment the sun has acted, the particles are loosened and the *scent* picked strongly up. Truly the particles are most subtle, but we cannot doubt their presence, and that they can be carried.

What the effect minute fungi have upon the animal frame has not been sufficiently attended to. The excess of them is extraneous and cannot be wholesome. Cattle could not eat the turnip leaves this year without consuming myriads of the white fungus. I did not think it would be wholesome, and did not feed with them. Our medical friends and members know very well the effect of Ergot. A species of this fungus is in some years very common upon

the grasses. Farmers very well know that in some years "casting of calves" is more frequent than in others, that it runs almost like an epidemic. It is nearly certain that this is caused by a preponderance of the fungus in those seasons. I do not wish all at once to give to animal disease a fungoid *origin*, but the same conditions of atmosphere (such as we have had this year) which stagnates the sap of plants and renders them more suitable for the development of parasitic fungi, also has an effect on the blood or sap of animals. You have heard of the vine disease. It is caused by a minute fungus *Oidium*. It has been found in France that wounds accidentally made on the fingers of the vinedressers when pruning the vines have proved fatal in from 20 to 25 days. The medical men are disposed to establish a coincidence between the circumstances necessary for the development of the *fungus* and a greater frequency of *certain forms* of *inflammation* of the *mucous membranes*; or, in other words, an *atmosphere* productive of fungus encourages also certain kinds of inflammation. The Rinderpest in Holland has been attributed by some scientific persons to the presence of fungi, and intermittent fevers, ague, &c., are traced by Dr Salisbury, of the United States, to certain species of *Palmellæ*. These facts should lead our members to give some attention to atmospheric influences, and to examine the effects which minute fungi may produce upon the animal functions and structures when from any cause they are brought near or introduced to them.*

The lowness of the water in lochs and rivers has also been productive of great profusion of low vegetable matter (plants that we term of lower life), which interfered with the higher forms. The running streams got crammed up with confervæ and like plants, to the interference even of animal life. Some of the smaller streams were dried up entirely, except pools of some greater depth. These were foul extremely,

* For very interesting information on these points see a paper on the Rinderpest in Holland by M. Ammersfoord,—the *Lancet*,—Mr Tilbury Fox, M.D.,—in Dr. Lancaster's *Journal of Social Science*, &c.

with germs of confervæ ; the water heated, and certainly not wholesome. The River Annan was so low that it could be crossed in places upon stones laid in. The bottom got extremely foul, and a green conferva grew in such abundance that no part of the gravel or stones was uncovered. A fish of any kind was scarcely to be seen.

But this state of the air and waters did not seem to affect injuriously the lesser mammalia, or birds, and was most favourable for insects. The smaller Rodents have bred remarkably, the field mice especially. The common rat has increased to a destructive extent. I never recollect rabbits having multiplied so exceedingly : they bred for nine months continuously. Birds have all bred largely. Entomologists will record this as a remarkable year, especially for Lepidoptera. In our range, the two species of common white butterflies* were never seen more numerous, and caught the eye of every one. The cabbages, &c., in our gardens suffered in proportion, and in some places were eaten so bare that the stems only were visible, and they grew up a sort of cabbage skeletons. It is curious that these butterflies feed also very freely on the leaves of the common Indian cress *Tropeolum*. Of the less frequent species *Cynthia cardui* was often seen. *Vanessa atalanta* was extremely abundant, and in the warm forenoons of August and September was a beautiful sight in the gardens, flitting everywhere, and settling ten or twelve at a time on one large sunflower. *V. Io*, on the contrary, was rather less common than usual. So also were the species of *Hipparchia*, including *blandina*. The hummingbird hawk moth was not uncommon ; I have seen three or four on the wing at the same time. As you would observe from the newspapers, this species was also noticed more than usually common throughout England. The night fliers are not so easily observed, and Mr Lennan will, perhaps, some evening inform us what he has noted. The death's head moth has been generally obtained in various localities, and some specimens of *Sph. ligustri* have also occurred.

* *Pieris brassicæ* and *rapæ*.

I have not received the account of any private excursions this year, such as I alluded to last. But one of our members, Mr Maxwell of Munches, has commenced the clearing out of an old castle upon his estate, Buittle Castle, once the stronghold of Edward Baliol. A well has been examined and emptied, and considerable excavations have been made, which will gradually expose the plan of the ruins. No pottery or metal instruments of much interest, nor any ash pit or kitchen midden has yet been come upon ; but the bones and remains of the same small ox we have already seen so common in the old residences, whether land or loch, was one of the most common. There were found also bones of pig, and roebuck, and, in the well, a portion of the antlers of red deer.

I believe nothing actually new has been discovered by the Society during the past season in zoology, botany, or fossil remains, but fresh habitats have been added, and the knowledge of our range is gradually filling up. Our work in a great measure has been in another direction,—The *fashionable* subjects of the past year. It is scarcely fair to give them that title, but nevertheless certain subjects get into a more than ordinary interest and reputation, are talked of by every one, and for a time are pursued with extraordinary and far more than usual zeal. These were, the exploration of bone caves, and the history of lake habitations. They both bore upon the subjects which I have especially alluded to in my previous addresses to this Society, “The age of man in this world and the animals which lived contemporaneously with him.” In regard to the first, our members who attended the meeting of the British Association at Birmingham could not avoid seeing the great interest this subject called forth. A large sum was voted for the exploration of various caves, both abroad and at home. In Malta, Dr. Leith Adams, surgeon in 22d Regiment for some time quartered there, made very important discoveries, and a second grant was made to continue these. This is an instance of a gentleman in active service employing all his leisure time in the pursuit of science. It has been the same wherever he was employed.

In India he devoted his time to zoology, visiting the Himalaya and Thibet ;* in the Mediterranean the same ; in Egypt the same, varying it with the ancient history of the mummied animals ; in Malta the zoology was soon exhausted, and the geology was suggested to him, which he for some time worked out with the greatest success. Another grant was made to explore caves in the Mauritius and adjacent islands, and already a consignment of Dodo bones has reached this country. At the same meeting an association of a more private kind was formed by the Anthropological Society, for the purpose of exploring the Kirkhead Cave, on the shores of Morecamb Bay, near to Ulverstone. This will be under the superintendence of J. P. Morris. But by far the most important was the grant (a second) of £200 to explore Kent's Cavern, in Devonshire. No one who heard the report by Mr Pengelly of the works already carried on could doubt the interest or importance attached to this exploration, or fail to be gratified by the careful and systematic manner in which it is carried out. There is a stalagmitic floor, above which a considerable depth of black earth has accumulated, in which the bones of recent animals, human and other remains leading to a date, occur. Above this, very large blocks of rock occurred, so large as to require blasting before they could be removed, and which also showed that no modern exploration or interference with this black earth could have taken place. Immediately below this and the floor of stalagmite lays the red earth or cave loam, four feet in depth, and which is now being excavated in layers of one foot each. This red earth contains the bones of the usual extinct cave animals, intermingled with works of human manufacture. The position or layer in which these occur is carefully kept and recorded, and many of the human implements are found in the lowest layer. A large number of the bones are scored with teeth marks.

* The Excursions in India are now passing through the press, and "Wanderings of a Naturalist," by A. Leith Adams, M.D., will soon be before the public.

It would be useless to theorise or draw conclusions until the explorations are completed. We shall then arrive at the facts of the case, and I believe shall be able to rely upon them. The point that will, I think, strike most people, is, Where did this deep deposit of red earth come from in which these bones and implements are irregularly imbedded? and I think that this must be traced and satisfactorily answered before we can arrive at any conclusion.

In reference to this subject, I cannot now refrain quoting a short passage from the work of a modern traveller, an author with his eyes open, and quite aware of all the difficulties of the question.

The Rev. Mr Tristram, in his *Travels in Palestine*, published under direction of the Committee for General Literature and Education, states that at Sunvah there are extensive stone quarries, from which ancient cities evidently have been built. That they were very extensive, and had been worked as mines, excavating the rocks, and leaving large chambers supported by pillars. These chambers or "caverns are now the dens of wild beasts, and the excrement of the hyæna covered the floors. Vast heaps of the bones of camels, oxen, and sheep had been collected by these animals, in some places to the depth of *two* or *three* feet, and in one spot I counted the skulls of seven camels.

"We had here a beautiful recent illustration of the mode of formation of the old bone caverns, so valuable to the zoologist. These bones must all have been brought in by the hyænas, as no camel or sheep could possibly have entered the caverns alive, nor could any floods have worked them in. Near the entrance where the water percolates they were already forming a soft breccia." (p. 237.)

In relation to the second or lake habitations we have during the past year works published increasing our knowledge of their range in Europe. "*Lake Habitations and Pre-historic Remains in the Turbaries and Marl Beds of Northern and Central Italy*," by Bartolomeo Gastaldi, has been translated and published by the Anthropological Soci-

ety, and will repay perusal and comparison with what we have been doing. Sir John Lubbock in "Pre-historic Times"—not pretending to be an original work—presents you with an excellent summary of information, and has a chapter specially upon the "Ancient Lake Habitations of Switzerland ;" and it will have been seen that our Society, following the example or affected as by an epidemic, has devoted a great portion of its time and the direction of its excursions to the exploration of the lochs within its range, and not without success. From all the information that has come to us of these curious buildings they have been of very ancient origin as well as of comparatively modern use among European nations, while among some uncivilized tribes such dwellings are at present inhabited. Some curious questions arise as to the use of all the different forms of them, and of the manner in which they were built or constructed.

The larger erections, or where there have been several placed together like villages, as those of the Swiss lakes or at Dowalton, were the natural habitations and defences of early tribes. They knew no enemy except some neighbouring tribe as ignorant as themselves or the wild animals of the country, the attacks of which they were able to cope with. So it is that we find the same kinds of habitations used in New Guinea and elsewhere at the present day. It was very natural for the early inhabitants of a country or for tribes now living without any intercourse with civilization to build themselves structures raised above an element always chosen as a defensive one, and where they were not easily approached or entered when the access passage was drawn in or removed. They were the residences, or as it might be the refuge from danger. Their moveable access the analogue of the more modern but disused drawbridge ; and we had the evidences of their living there by the utensils, weapons, ornaments, and remains of a varied commissariat which we can still gather in and around them.

The large Irish crannogs, again, are known historically to have been the strongholds of petty Irish chiefs, but it is

more difficult to understand the use or purpose of the small crannogs we have been investigating this year. They must have been constructed with very considerable labour, but their small size would unfit them for any lengthened residence. Utensils have been found upon or near them, but I am not aware of any clue being given to their real use unless they were store places where larger habitations were near. They are perhaps analogous to the *Packwerkbauten* of the Swiss lakes which were formed of a solid mass of mud, stones, &c., with layers of horizontal and perpendicular stakes.

We have this year examined two of these small structures as I have already described to you, and I visited a third in the Castle Loch, Lochmaben. It was during the fishing for vendace when I was making enquiry if anything of the kind was known there that a man present said he knew of one and could take me to it. He did so, and we found what appeared to be a large heap of stones only a few yards across, and then from 12 to 18 inches below the surface. He said that he and his brother had some years since taken from three to four cart loads of oak wood from it. I think that round this loch there may have been at a former period some larger stockaded habitations.

The buildings raised upon platforms we can more easily understand : in those of very early date the piles would be cut, sharpened, driven, and the entire habitation erected with the rude instruments then in possession. In the case of Dowalton and those we have examined the marks of metal tools are clearly evident, but these structures could scarcely be made when the water of the lochs was at its present height. The habitations in Dowalton stood upon a foundation of stones, heather, fern, and brushwood ; the piles and stockading was to strengthen them. They were inhabited, and when so they were above water. The suggestion made by Sir W. Maxwell of Monreith was an easy explanation :—“The waters originally discharged themselves into the sea from the western end of the valley, a portion of them only now finding an exit that way in consequence of the forma-

tion of the moss towards the centre of the valley which compelled the remainder to flow into the loch.”* In an Irish crannog lately described by Professor Harkness:—“Drumkeery Crannog,” writes the Professor, “was certainly not formed by first raising the surface above the water level. There is evidence of the rising of the level of Drumkeery lake $5\frac{1}{2}$ feet since man left records of his existence on its banks. The elevation of the water, it might be assumed, has been brought about by earthquake influences, but there is no necessity to have recourse to mere conjecture in this matter. On the east and west sides of Drumkeery lake extensive peaty tracts occur. These peaty tracts have invaded the margins of the lake, reduced its area, and caused its waters gradually to rise in level.” (*Archæologia*, vol. xxxix., p. 8.)

We did not sufficiently examine the outfall of the Barean loch at Clonyards to ascertain if it could have been closed up naturally and so have allowed the water to accumulate. But at Sanquhar loch the builders of the crannog there either lowered the water by the outfall we made use of or the loch then was not nearly so deep as when we examined it, and the peat gradually forming both stopped the outfall and encroached upon the bounds of water. The latter is the most probable; an opening or well upon the west communicated with the loch, and upon that side the peat or moss rested upon water. The regular pile of building could not have been raised as it exists in four or five feet of water. I believe that in all those instances where the structures are now submerged that it arises from this cause, and although nothing may appear upon the margins of a loch to awaken curiosity we should not be satisfied until we have examined the bottom some distance from its shores.

With these observations I would close this address, recommending our members to continue their researches among the many lochs of their district. The subject has the advantage of being there almost quite untouched, and will most amply repay investigation.

* Rep. B. Ass. Newcastle, p. 143.

TRANSACTIONS.

NOTES ON SOME RARE MINERALS OCCURRING IN THE DISTRICT. By PATRICK DUDGEON, Esq. of Cargen.

THE granite or rather syenite of this locality—including the districts of Criffel and Dalbeattie—is remarkable in having diffused through it in more or less abundance crystals of sphene (a silicate of lime and oxide of titanium). Sphene is not a common mineral in Great Britain, and is found in few localities, generally in small crystals disposed through gneiss and syenite. In this district the crystals are generally small, the largest I have met with not being over $\frac{1}{3}$ of an inch across; colour hair brown, lustre adamantine. The crystals are generally sparingly distributed through the syenite, but I have met with it in patches in such quantities as almost to form a constituent of the rock. Some books on mineralogy mention zircon as being found in the syenite of the district. I think this is a mistake. The late Mr Copland of Blackwood, who carefully surveyed the district, could never find any crystals of this mineral, and I also have looked for it in vain. The error—if it is one—has probably arisen from the peculiar form of some of the crystals of sphene, which, examined superficially, have much the appearance of zircon crystals.

Professor Heddle and I also found in blocks of syenite about a mile up the Newabbey Burn small crystals of allanite, a mineral containing the rare metal cerium: this is the first time this mineral has been found in Great Britain. In the same locality we found small granular masses about the size of a pea of a black vitreous mineral supposed to be gadolinite. The crystals of allanite though small were quite

distinct, and were sent to Mr Greg for examination, who at once pronounced them to be allanite, and the mineral is now recognised as a British one in Greg & Lettsom's late work on British mineralogy. Gadolonite is rarely found well crystallized; what we found at Newabbey not at all so, and the quantity was too small for analysis. The only other locality in the United Kingdom—if this should prove to be one—where the mineral has been found is in the county of Galway, where a single specimen was got of small size.

I may mention I lately carefully examined the large granite quarrie near Creetown—this is not syenite—but could find no trace of the minerals above referred to in it.

In some places owing to the greater abundance of hornblend the syenite is much darker in colour than in others: it is owing to the presence of this mineral that the stone obtained from the recently opened quarry at Kirkconnel is darker than that of the Dalbeattie quarries; it also contains a larger proportion of mica than the latter rock and is much richer in sphene crystals.

SPHENE—

Titanic acid,.....	41.33
Lime,.....	28.22
Silica,.....	30.45

100

Chemical Formula—



ALLANITE—

Contains about 20 per cent. of oxide of cerium.

Chemical Formula—



R being Ca, Ce, Fe, and R (alumina) Al.

THE ABBOT'S STONE IN DUNDRENNAN ABBEY. By JAS.
STARKE, F.S.A. Scot.

AMONG the old monuments at Drundrennan Abbey is the Abbot Stone. It is lying in the abbey on the ground, but not being a mere slab, it may have been raised a little, or even originally stood upright.

It has on it an incised figure, full length. This figure is a monastic dignitary. He is a monk, with shaven crown and in loose vestments, holding in his right hand a small cross or crucifix, and in his left an episcopal staff or crosier, the end of which is resting on the left temple of a small figure recumbent under the Abbot's feet.

This small figure is that of a person bareheaded and kilted, with something like a snake in his hand. His legs are hanging down from the knees to the ground, having on them large brogues or boots, and the abbot's right foot is clasped under the left arm.

This is what we find on the Abbot Stone. There is no legend or inscription, nor any date upon the stone. The figures are supposed to tell their own story ; and what appears meant to be represented is, the subjugation of the small figure under monastic power and influence.

The small figure under the abbot's feet is, of course, a representative man ; and he may represent the wild Scots of Galloway.

Galloway was in early times a separate and peculiar district, with its own lords or reguli, and its own people, with their own language, laws, and customs. They were a Celtic population, and retained their native language, which Tytler says was the Erse, down even to Buchanan's time. *Ea magna ex parte patrio sermone adhuc utitur.* This would be in the latter part of the sixteenth century, the History of Scotland being published in 1582. A Gaelic-speaking population is obviously under great disadvantages in the march of civilization : for, by their want of the

language, they are shut out, in great measure, from the literature, and learning, and the civilization of England.

We have some account of their condition at the Battle of the Standard, in 1138.

On this occasion the Galwegians claimed to lead the front van of the Scottish army ; and, as Nicholson's "Galloway" expresses it, "dreading dissention or sedition, the King reluctantly complied with the request of the turbulent Galwegians."

They were a fierce people, and were accused by the English of all sorts of barbarity and impiety. They drove people before them like herds of cattle—they tossed up little children in the air and received them again on their spears in frolic and diversion,—and were so utterly regardless of the rites and ceremonies of the Church, that we must conclude their religion, whatever it was, was not the religion of Rome : caring nothing for the consecrated host, even trampling it under their feet, as the English general said, and eating flesh in Lent as at other times.

They were perhaps Culdees ; and as to their barbarities, which appear savage, something is perhaps due, both in the facts and colouring, to the old enmity between Celt and Saxon.

If the view here taken of the Abbot Stone sculpture is correct, this people were, however, at length brought under monastic power and influence ; and the Abbot Stone may be found to bear the very earliest pictorial representation of a Galloway man. And, making allowance for the exaggeration natural to a subduing over a subjugated people, the representation may be taken as correct.

This is the conclusion which, in a general way, we would draw from the Abbot Stone sculpture.

If a more special object of commemoration be supposed to have been intended, it might be the conversion of the Culdee population to Rome. That event was a great event. Perhaps it was regarded as of more importance than the original conversion of the Picts to Christianity. Their be-

coming Christians was good, but their coming within St. Peter's fold was better.

It would be interesting to know, if, in any other district, there is any similar sculpture, commemorative of the same event.

These are the few observations I have to submit respecting the Abbot Stone sculpture.

ON CERTAIN "MARKINGS" ON THE DRUID CIRCLE IN
HOLYWOOD. By Dr. DICKSON, the Secretary.

THE object of the following brief communication is to bring before the notice of the Society certain markings upon the stones of the so-called Druids' circle in Holywood. This circle stands, as most of you are probably aware, in a field upon the Dunscore road, about 150 yards beyond the New Bridge toll-bar. The stones are eleven in number, and although forming in themselves a tolerably exact circle, I am disposed to think, from the irregularity in their distances from each other, that there may have been originally more. No tradition, however, exists of any having been removed, or that the group has ever been otherwise than it is at present. A certain superstitious respect still attaches to the spot, and may even have had something to do with the preservation of these curious relics, for gossip still records how upon one occasion some farmer, more zealous in the cause of agriculture than of archæology, attempted to remove one of them, and that the work was immediately arrested by a violent storm of thunder and lightning. The stones are rough blocks, for the most part boulders, which may have been left, probably near their present site, during the glacial period. They differ much in size and appearance, but are all equally rugged and irregular as nature has fashioned them.

The attention which the whole subject of rock symbols and stone sculpture in relation to the early inhabitants of

this country is at present receiving, led me to examine these stones in search of some traces of a similar character; and I shall now describe, as carefully as I can, what I found, without expressing any opinion as to their origin or signification. Of the eleven blocks, four are granite and seven greywacke or whin, and it is upon the latter only that the markings to which I have to refer are found, and upon four only of these. These markings are simply hollows or depressions upon the surface of the stones. In one case they are upon the exposed and weather-worn face of the stone; in all the rest, I think they are upon surfaces more or less sheltered by their position. It would be difficult—almost, I think, impossible—to trace any order or regularity pervading their arrangement; perhaps a tendency to a linear order might be observed, but even this is doubtful, and admits of marked exceptions. The hollows themselves are pretty uniform in size, especially where protected from the weather, and are generally of an irregular oval shape, tending sometimes to circular. This latter feature is especially marked on one of the larger stones,—indeed, the largest of the group—and as, from its position, the surface upon which these are found has been almost completely protected from the weather and other destructive influences, it is here that these peculiar markings may be best studied. It is impossible not to be struck with the perfectness and singular freshness, so to speak, of some of the depressions upon this stone,—at the same time, it is here that they are most irregular and capricious as regards arrangement. By far the larger surface of this stone slopes outward from the circle, and contains no markings whatever, and it is upon what must have been the base, had it ever stood upright,—which is doubtful,—that these hollows exist. I have been informed, however, that it is not unusual in such circles to find the broader end forming the summit, while the narrower is sunk deep in the earth. If such has been the original position of this stone, then the broader end or base, upon which these markings occur, would

have been uppermost. As regards the dimensions of the hollows and depressions referred to, they vary considerably, although not so much so as to interfere with their character as a whole, or to destroy their general resemblance. I should say that their average diameter is an inch and a-half, and their depth one inch, but the departures from this rule are very marked and various. It is obvious that the rock surface has not been prepared in any way for these markings, but is in its natural state, broken and irregular and ragged. No trace of the operation of any tool or instrument is discoverable, either within the hollows, or upon the face of the stone. It is difficult to convey anything like an accurate idea, in words, of these singular markings. I must refer you therefore to the diagrams before you.

I have said that I wish to express no opinion as to their origin and signification. This need not, however, prevent me from anticipating one or two possible and seemingly plausible explanations which may suggest themselves, and I do so at present, more especially for the sake of clearing the ground for connecting the subject with that of rock markings in general, and of showing the remarkable similarity which exists between what we have been describing and certain forms of marking which are now regarded by antiquarians as undoubtedly artificial and symbolical.

And first, that the markings on the Holywood stones are due to natural causes, to the slow operation of atmospheric agencies. To this explanation I have no objection, only it must first account for their greater prevalence in situations where the protection from atmospheric influences is greatest, which, as I have already pointed out, is a marked feature in the case,—the base of the larger slab being positively honeycombed with these hollows and depressions, and conversely it must account for their non-existence, comparatively speaking, where the exposure is greatest, only one of the slabs presenting them on its exposed surface, and where it may be remarked moreover that atmospheric

causes are silently operating rather in effacing the old markings than in creating new ones.

Another explanation which may readily suggest itself is that these depressions may have been formed by the falling out of rounded pebbles and nodules of other kind of stones, as may be seen every day in the rocks around us. To make this explanation plausible, however, we should expect to find the same cause at work on the Hollywood stone now as heretofore, which is certainly not the case; indeed the homogeneous structure of the stones precludes even the possibility of such a cause.

Doubtless many other similar suggestions and explanations would arise from a consideration of the various operations of nature in the wear and tear of material. I should not, however, have thought it worth while to bring this subject before the notice of the Society but for the connection which I think will be seen to exist between the Hollywood markings and certain markings of a similar character which have been found in other parts of the country, whatever may be the importance which may be attached to either. I allude especially to the figures described by Mr Tate in his paper on "Ancient Sculptured Rocks," published in the last issue of the proceedings of the Berwickshire Naturalists' Club, which was laid upon the table at our last meeting. On a considerable number of the stones there described there are hollows and depressions precisely similar to those on the Hollywood circle. They are, however, almost invariably found accompanying or forming part of other figures, recognized as undoubtedly artificial and symbolical. It is impossible, therefore, not to believe that both are designed, and bear some relation to each other, and if so in the case of those described by Mr Tate, we may readily suppose that the same will hold good as regards the Hollywood circle.

NOTES ON THE DRUID CIRCLES IN THE NEIGHBOURHOOD OF INVERNESS. By Dr GILCHRIST.

HAVING during the summer been in the neighbourhood of Inverness, noted amongst other antiquities for its Druidical Circles—having had two or three days to spare, and stimulated by a paper previously contributed to the society by Dr Dickson, on certain markings found on the Druidical stones on the banks of the Cluden, I paid a visit to as many of them as were within reach, and now give you the results.

First, I visited a Druidical Circle on the top of the ridge, between the well-known hill of Dunane and Craig Phadrich, 3 miles south-west of Inverness.

Having probably contributed to the erection of two or three successive generations of cottages in the neighbourhood, I found it in comparative ruin and disorder ; three concentric circles were, however, still traceable.

Second, visited another about 3 miles south of Inverness, on the east side of the road along the right bank of the Ness. Here the dilapidation was nearly as great as that of No. 1, the three concentric circles were, however, much more obvious, and easily traced, and besides there was a passage, distinctly visible, leading from the outer to the inner.

Third, visited a third at Leys, about 4 miles south-east of Inverness.

Found this very much in the same condition as the last described, with three distinct concentric circles and passage. It is, however, on a much more extensive scale than either of the two previously mentioned, many of the blocks are immense boulders of granite, and one, a sandstone conglomerate, locally called the sacrificial stone, is 18 feet in circumference, and 8 feet high above ground.

Fourth, my fourth visit was made to Clava, which appears to have been the *sacra sacrorum* of the Druids.

The spot is situated about a mile east of the field of Cul-loden, in a much secluded pastoral valley running north and south, bounded immediately on the west and east by a ridge of hills.

Here, in this solitary and well chosen spot, we have three distinctly separate yet closely contiguous sets of so-called Druidical Circles.

The first to the north consists of the usual outer circle of isolated blocks ; within this, in the centre, is a circular chamber, the wall of which extends outwards and is nearly equal in thickness to the diameter of the chamber itself.

The diameter of the chamber is 15 to 20 feet, is approached from the outer circle by a passage of about 2 feet wide through the thickness of the surrounding wall.

Several feet of this wall remain to prove that it was built of stones in their natural condition, and so constructed as to form, over the chamber, a spherical arch, constituting the latter a hollow cone, so that when entire it must have appeared very much like those unæsthetic structures called bottle-works, familiar to all who have visited Leith.

The interior and exterior sides of the wall are faced with large slabs of stone, inferior in size, however, to those constituting the outer circle, the interspace being filled up with loose stones, apparently thrown in at random.

The same construction is observable in the passage of communication.

The spherical arched roof of the interior chamber is formed by the gradual approximation to each other of the successive courses of stone as they rise higher and higher.

No. 2, which lies immediately south, is in a much more dilapidated condition than that already described, but amidst the paucity of its remaining materials there can easily be traced the same form and construction.

No. 3 is again in very much the same condition as No. 1, and the description of which will equally apply to it.

In short, however dilapidated they may be now, enough remains to shew that as to material, form, structure, and arrangement they have been fac-similes of each other.

Allow me now to generalize these facts.

1st, In the whole of these six Druidical structures there are distinctly traceable three concentric circles in each.

2nd, With one exception, the first visited, and that apparently due to the scantiness of its materials and disarrangement of structure, the same can be affirmed with equal certainty of the approach alluded to, viz., a narrow passage leading from the outer to the inner circle.

3rd, This passage was found in every case to be nearly due south, or, so far as my imperfect observations may be depended upon, a little west of south.

4th, The more perfect condition of the remains at Clava, especially as regards two of the structures, appear to me to give the key to the formation of those whose less perfect remains do not so easily indicate their original form, and thus warrant the inference that the whole six were originally precisely the same, viz., that each separate structure originally consisted of an interior chamber enclosed by a thick wall, and entered through it by a narrow passage from the south, and surrounding all an exterior circle of isolated blocks.

My general conclusion is that the three circles so often mentioned are,

First, the exterior one, consisting of isolated blocks, and corresponding to that with which we are more familiar in similar structures in our own neighbourhood.

The second consisting of the foundation slabs which originally formed the base of outer side of the wall inclosing the interior chamber.

The third consisting of the corresponding blocks on the inner face of the wall—that is, constituting the boundary wall of the chamber itself.

I am further of opinion that all this is capable of simple explanation, if not of easy proof. It is well known that wherever the demand existed the materials of these structures have been devoted to utilitarian purposes, from which it naturally follows that where the demand was greatest the perfection of the original structures would be least.

Thus in the three first structures visited, which lie nearer to Inverness, and in a more populous district, and where the

demand was great, we find all the manageable materials removed while the less useful and unmanageable are left, viz., the large and unwieldy masses forming the outer circle, and the basement of the outer and inner sides of the chamber wall.

At Clava not only is the supply greater from the increased number of structures but the demand less from its isolated position, hence here even the manageable materials have been only partially removed.

May I further hazard a conjecture: may it not be in our own neighbourhood, where, so far as I know, only one circle occurs, the outer, as I suppose, that the absence of the two interior are due to the greater demand for material in a populous district. The slabs, of which these two are constructed, being always much less in size and therefore more manageable than those forming the outer circle.

Let me now say a few words as to the marking found.

So far as I know those markings have not been hitherto discovered or described, at all events they are not mentioned in the last edition, 1863, of Anderson's well known scientific Guide to the Highlands. I must state, however, that I am not acquainted with and have not time to examine the literature of the subject.

These markings were found by my companion, Mr. Browne, and myself, on the most southern of the three structures at Clava.

The first on a slab in the basement of the interior face of the chamber wall, contiguous to but on the western side of and at the interior termination of the entrance passage.

The slab was a tolerably fine sandstone, apparently in its upright and original position, but covered with debris to an unknown depth.

Three to four feet square of its upper portion was exposed, exhibiting ten markings seen in the diagram, and which as to form, size, and relative position may be considered pretty exact, as they were transferred to the present sheet from a rubbing taken on the spot.

The markings are cup-shaped, cup-sized, somewhat irregular in outline, different in size, and in depth vary from a quarter to an inch. Their irregularities probably to some extent depend on the weathering of the stone.

On revisiting the northern-most structure similar markings were found on the last slab of the western side of the entrance passage, fewer in number but in all other respects the same as those alluded to.

Other markings were found, or supposed to be found, but too obscure to be thought worthy of note or comment. In making these observations I have endeavoured to confine myself to the facts which came under my own observation.

The only allusion to theory I wish to make is a suggestion offered by one of my patients, to whom I am indebted for the construction of the diagrams—viz., that the thirteen blocks which constituted the outer circle of the structure, in which the markings were found, represented the thirteen moons of the year, and prove that these temples were dedicated to sun worship.

THE REGULATION OF FARM SERVANTS IN DUMFRIES-SHIRE IN 1751. By W. R. M'DIARMID.

As at present something like an agitation has sprung up among the farm servants in the midland counties of Scotland, it may not be uninteresting to obtain a peep into their condition and the relations betwixt them and their employers in Dumfries-shire 115 years ago.

The following extract is taken from a minute of a meeting of Quarter Sessions held at Dumfries on the 5th of March, 1751, the sederunt consisting of Sir Robert Laurie of Maxwellton, Commissary Goldie, Collieston and Guillyhill.

The first proceeding of the Trustees, by the way, at this meeting was to banish from the shire three persons named

Mary Cuthbertson, William Beaty, and Charles Stewart. No information is given as to the offences which they had committed. If these persons were farm servants, unless other counties were under the same regulations as Dumfries-shire, the punishment inflicted might not be held as a severe one.

“The Justices of Peace considering that, notwithstanding of the former regulations and acts made anent servants’ fees, and the time and manner of hiring servants, the said acts are broken and disregarded to the great hurt and prejudice of the tenants and land labourers occasioned by the extravagant humour of servants by reason of the present plenty. For remedy whereof, the said Justices, to the effect that there may be due order and regulation anent the premisses in time coming, do ordain and enact that the fees of servants within this shire from and after the term of Whitsunday next, 1751, until it shall be thought expedient to make new regulations concerning the same, shall be as follows, viz. :—

“That a domestick servant man who can plow, thatch, mow hay, bind, cart, ear, and harrow, and work all husband work, and is an ax-man for all husband utensils, shall have any fee agreed upon betwixt his master and him, not exceeding two pounds ten shillings sterling yearly, or two pounds five shillings sterling, and two pairs of shoes.

“Item, that a barn man who can thresh in the winter season, herd a sufficient hirsle in summer, and can lay on loads and drive carriages, and is capable to serve at kiln and miln, shall have any fee agreed on as said is, not exceeding £1, 16s. 8d., or £1, 11s. 8d. sterling and two pairs of shoes.

“Item, a young man or lad who can lead or drive the plough in winter, or herd calves or stirks in summer, shall have any fee, agreed on as said is, not exceeding 18s. 4d. sterling yearly, or 13s. 4d. sterling and two pairs of shoes.

“Item, a strong sufficient servant woman for barn, byres, shearing, brewing, baking, washing, and other necessities within and about the house, shall have any fee agreed on as said is, not exceeding 30s. sterling yearly, or 25s. and two pairs of shoes.

“ Item, a lass or young maid who can spin or card in the winter season, and herd in summer, shall have any fee agreed on, not exceeding 16s. 8d. sterling yearly, or 13s. 4d. and two pairs of shoes.

“ Which respective fees above mentioned are hereby declared to be in full satisfaction to men and women servants of all that can be asked or craved or shall be given to them for their year’s fees as above mentioned. Declaring that where the master gives or the servant receives any greater fees than those above expressed, such feeing is hereby declared not only void and null, but also both masters and servants who shall presume to contravene the premises shall be liable in ten pounds scots each to be paid to the procurator-fiscal upon their being convicted thereof before the Justices of the Peace either by their own oaths or by witnesses, and that *toties quoties*: which fines shall be applied by the said Justices as they shall think proper, and declaring that where any surplus or bounty such as grazing or wintering of nolt or sheep, shoes, shirt, linen apron, or any other additional bounty whatsoever shall be given and received by any master servant more than what is particularly above appointed, the same shall be accounted a transgression of this Act, and the parties transgressors fined and punished conform thereto as above: and because there may be several private pactions and underhand dealings between masters and servants which may be so privately transacted that neither the Justices of the Peace or constables can have any knowledge thereof, Therefore for redressing such abuse it is hereby declared and ordained that whatever person or persons shall dilate any master or servant who have contravened the premises by giving or receiving greater fees than those mentioned, and shall prove or make out the same by witnesses or oath of party, the informer shall have one-half of the fine incurred for any such transgression with his expenses off the other half of the fine to be modified by the Justices. And whereas great inconvenience happens by servants feeing at any time they please and by their feeing

for less than one full year, therefore for preventing such inconveniences for the time to come it is hereby enacted and ordained that no servant shall hereafter fee or engage with a new master for less than the space of one year to serve his said master : and it shall be in the power of the master to keep him or her as his servant for that time : and albeit he or she should fee to another such feeing is declared void and null, and the servant shall be liable to be fined as above : and it shall not be in the power of the masters to turn off their servants for one year after feeing, under the above penalties, unless when sufficient cause can be shown before some of the Justices. Provided always that if both the masters and servants voluntarily agree to part at the end of half a year they shall have liberty to do so : and it is hereby farther enacted that no master hire domestic servants, male or female, for ordinary household service or labour and husbandry within or without house within this shire, and that no servant hire himself or herself preceding the first day of March as to those whose entry shall be at Whitsunday, and the first day of September as to those whose entry to their service shall be at Martinmas, (excepting always that masters may hire their own servants at any time,) certifying the contraveners hereof, either masters or servants, that they shall not only be liable in a fine of half a year's fee conform to the regulations above mentioned, and shall be further proceeded against as the Justices shall think fit, but all agreements made with servants before the times above mentioned shall be void and null and of no effect : and whereas there is a great penury of good servants, and that many of them are frequently much inclined to idleness, and both men and women servants very often leave their service and keep themselves idle without any visible lawful employment, for preventing all which inconveniences for the future the said Justices hereby enact and ordain that no persons who have been in the use of hiring themselves as domestic servants to husbandmen or labourers of the ground shall betake themselves to any other employment without a license from

two Justices of the Peace, under pain of twenty shillings sterling, besides being liable to be obliged to serve as a domestic servant for the space of a year to any person who shall apply to a Justice of the Peace for that purpose, and if any person want a labouring servant, either man or woman, and can discover any person fit for service not engaged who is not following some lawful business, or who has been formerly a domestic servant and who has not got a license to employ him or herself otherways, upon a complaint thereof to any one Justice of the Peace any such servant shall be obliged to enter home to such master claiming him or her, or shall be obliged to give security for his or her appearance at the next quarter sessions, to be tried and punished in terms of this Act, according as the Justice before whom he or she is brought shall see cause ; and in case the Justice shall take security for such person's compearance before the Quarter Sessions he shall inform the Procurator-Fiscal thereof that he may prosecute him or her accordingly : and farther, the said Justices enact and ordain that when any servant inclines to remove from his or her present master, he or she shall be bound to give over their master's service three months before the time of removal and that before two witnesses, otherways his or her service is to be continued for the next ensuing year ; as also that the said servant's master is and shall be obliged to accept of his or her service : entertain and pay him or her for the same unless that he can instruct that three months before the term of removal he did discharge and free his said servant from his or her service before two witnesses : and for the encouragement of servants the said Justices ordain that their masters make timeous and punctual payment of their fees : and if any servant complain to any one Justice of the Peace of their not being punctually and thankfully paid of their fee, the said Justice is empowered to compel the deficient master complained upon to make present and complete payment to the complaining party of what shall be found justly due, with such reasonable expenses as the said Justice

shall think fit to modify to be paid with and over and above the resting fee. And, further, the said Justices enact and ordain that all persons who have been ordinary servants or are in any capacity or ability to serve, both men and women, older and younger, and are not presently in service, that they immediately apply themselves thereto and fee themselves to such persons as have occasion for them, not exceeding the said fees and wages above mentioned, otherways to be reputed and holden as vagabonds, and punished as such, and that the Justices in their several districts cause apprehend all such idly disposed persons as shall after the term of Whitsunday next be found within the same and incarcerate them until such time as they go to service or find caution or enact themselves to serve in the foresaid terms: Declaring that the above regulations with respect to the extent of fees shall not be extended to Annandale or the Five Kirks of Eskdale, where because of their vicinity to England different rules are necessary to be observed, which the Justices in that bounds are desired to make, and in the meantime they are to proceed as formerly. And the Justices ordain these presents to be immediately printed and published and a copy thereof to be sent to the precentor of each parish kirk to be by him read the first Sunday after receipt of the same immediately after divine service, and retained in the custody of the said precentor that all persons may have access to see this Act, and appoint copies thereof to be fixed on the several kirk doors and on the mercat crosses of the several burghs within this shire that none pretend ignorance thereof."

The allowance made in the scale of wages fixed by the Justices for pairs of shoes enables a comparison to be drawn betwixt the real value of wages in 1751 and in 1866. I find upon enquiry that the present price of the strong shoes worn by workmen is 12s. 6d. ; in 1751 the price was 2s. 6d. The average wages of experienced ploughmen at present is £18 per annum, giving a purchasing power of nearly thirty pairs of shoes ; the wages in 1751 possessed a purchasing

power of twenty pairs. Taking shoes as the standard of value, the ploughman's wages in 1751 were equal to £12, 10s., so that the wages in 1751 were rather more than two-thirds of what is now paid.

The wages of experienced female servants hired for farm work are at present £9 per annum, and the price of their shoes is 8s. 6d. This shows a purchasing power of twenty-one pairs of shoes. In 1751 their wages had a purchasing power of twelve pairs. Taking shoes as the standard of value, the wages of women servants in 1751 were equal to £5, 2s. per annum. In 1751 the Justices state the cost of shoes for men or women at the same figure, 2s. 6d. : at present women's shoes are about a third cheaper than those of men.

CLERICAL CUSTOMS IN THE OLDEN TIME—PREACHING
AND THE PULPIT. By Rev. D. HOGG, Kirkmahoe.

To even a mere superficial observer of men and manners, it is evident that there has no greater change come over the face of Scotland during the last one hundred years than that connected with the clergy in the discharge of their professional duties. In their pulpit ministrations, church discipline, and pastoral superintendence in general, very great alterations have taken place, and it is gratifying to know that so far as these have been effected they have generally received the approbation of those whose opinion is entitled to regard. No doubt further modifications are thought necessary and are desiderated, and it is only reasonable to suppose that in the course of time they also will be carried out, for there is nothing truer than the common maxim, "*tempora mutantur et nos mutamur.*" One of the best encomiums which man can receive after he has passed away is the assurance by posterity that he served his day and generation, and the same may be said of all other things as well.

Some of the clerical customs which were supposed to edify and enlighten in olden time have undergone considerable modification, while others have died away altogether, and without any disrespect to the memory of these latter, or those men who carried them into practice, it may be said of both, that the day of their death was better than that of their birth. They had their day, and they were in some degree suited to the character of the people, and were intended to be beneficial to the interests of religion, though we fear it must be said that their self-importance greatly exceeded their usefulness even when most effectively carried out. The *edification* of these times seems to have had a close affinity to its namesake *terrification*, as we shall in another paper show. To see men and women with the almond tree in blossom, trembling before their minister, like malefactors before a judge, or school boys before their master, but yet unconscious of any reason why, was by no means an agreeable sight ; and it is now matter of wonder that such a state of things should ever have been tolerated in a Christian land. However, the ban of the clergy was an irresistible power, and excommunication from the privileges of the church was regarded as tantamount to exclusion from the kingdom of heaven itself. We shall now give a sketch of some of these customs which have now either become obsolete, or are greatly modified in their observance, and we shall begin with those having reference to *Preaching* and the *Pulpit*. Our illustrations shall be drawn from whatever reliable sources are within our reach, whether oral or recorded, though a special preference will be given to such as are original, or have never been met with in print.

The Clergy seem to have affected a display of gaudy colours and costly material, as well as rich ornamentation in the style of their costume, from the time of the Reformation for more than a century and a half downwards ; and the General Assembly of 1575, in order to check the tendency, considered it necessary to pass the following Act on the subject :—" Forasmuch as comely and decent apparel is requisit

in all, namely in Ministers, and such as bear function in the Kirk, we think all kind of broidering unseemly, all Begairies of velvet in Gown, Hose or Coat ; all superfluous and vain cutting out, steeking with silks ; all kind of costly sowing-on of Pasments, or sumptuous and large steeking with silks ; all kind of costly sowing or variant hews in shirts ; all kind of light and variant hews of clothing, as red, blue, yellow, and such like, which declare the lightness of the minde ; all wearing of rings, bracelets, buttons of silver or gold, or other finge metal ; all kind of superfluity of cloth in making of hose ; all using of plaids in the Kirks by Readers, or Ministers, namely in time of their Ministry and using of their office ; all kind of souning, coating, doubleting, or breaches of velvet, satine, taffaty, or such like stuffe ; costly gilding of whingers and knives ; silk hats of divers and light colours. But we think their whole habit should be of grave colour ; as black, russet, sad-gray, sad-brown, or searges, worsat, chamlet, grogram, syles, warsat, or such like. To be short, such as thereby the Word of God be not slandered through their lightness or gorgeousness ; and that the wives of Ministers be subject to the same order.”—(Calderwood’s History.) From this it will be seen that the home-made dark-gray cloth in which the clergy clad themselves was not altogether of their own choice, or necessitated by their poverty, but was worn as obedient sons of the church.

The pulpit costume of the preacher was by no means a matter of indifference, or left to his own selection. As gowns of various colours, but generally *gray*, continued to be worn in the pulpit, and were thought unbecoming the graveness of the profession, the Synod of Dumfries in 1696 passed a recommendation to the following effect:—“The Synod, considering that it’s a thing very decent and suitable, so it hath been the practice of ministers in this Kirk formerly, to wear black gowns in the pulpit, and for ordinary to make use of bands, do therefore, by their act, recommend it to all their brethren within the boundsto keep up that laudable custom, and to study gravity in their apparel and deportment every manner of way.”

The use of the gown was long objected to by the people as being a "remnant of Popery," as well as the bands, called the "*bib*," and in some parishes at the present day the hostile feeling is not extinguished. The first time the minister of Kirkmahoe appeared in this vestment, which had been presented to him by Mrs Hannah of Carnsalloch, many of the congregation demurred, fretted, and threatened to leave the Church. The Precentor was not forthcoming from that day afterwards, without giving any reason or intimation of his absence; and it was only after a year had elapsed that a pencil-writing was found in the inside of the precentor's book declaring he would no longer precent to a minister that wore a black gown. In some of the Dissenting churches this "remnant of Popery" has never yet been allowed.

The psalm sung at the commencement of public worship was called the "inganging" or the "gathering" psalm, from its being sung at the gathering or assembling of the worshippers. It was always prefaced or explained for about 15 or 20 minutes, the occasion of its composition, the feelings and aspirations of the author being fully dwelt upon, and a suitable application made of the whole to the circumstances and condition of the present audience. This was peculiarly favourable to devotional sentiment, and a good preparation for the portion of the service which was to follow. But it was apt to degenerate into mere religious disquisition in order to fill up a certain amount of time, as all psalms were not equally pregnant with spiritual thought; and as some of them came to be given out again at no great intervals of time, the exposition, if textual, would begin to appear monotonous from repetition. On the whole, however, the practice was a good one, and ought not to have fallen into desuetude, leaving the people to make their own application of the psalm, if they make any at all.

From the want of psalm-books in the congregation, each line of the psalm was read out by the precentor immediately previous to its being sung. This was called "reading the line," and it enabled those who had no book, or whose eye-

sight was dim, to join in the celebration of praise with the mouth and the understanding also. When the Scriptures with the psalms, paraphrases, and hymns, attained greater circulation, and every worshipper was understood or supposed to possess a copy, the reading of the line began to be discontinued as no longer necessary, an innovation which was greatly resented by the majority of the people, some of whom refused to join in the psalmody thereafter, and some left the church and united with others where the practice was unchanged. The reading of the line was performed with a peculiar intonation, the last syllable being protracted beyond any of the rest; and as the pronunciation was not always the most correct strange blunders were sometimes committed. Thus the 2d line of the 42d psalm was always read, "In *thurst* doth *paint* and *breiy*." The 16th line of the 35th psalm was read, "They *ganshed* their teeth at me." The word soul was pronounced *sowle*—incessant was called *innocent*, and similar other mistakes were made. Even when no such mistake occurred, the very separation of the lines sometimes created awkwardness and confusion. Thus "Be silent, but speak out"—and the line too, "I'm like a broken pot," sometimes tickled the fancy of the hearers from its striking appropriateness to the precentor himself on the occasion. From his position in the desk he obtained a full view of the audience, and from his long tenure in office he assumed a freedom and a familiarity which does not seem to have been taken amiss, and he would occasionally interpolate the singing with reference to the conduct or the duties of those before him. In a church in the West of Scotland the family of a noble house was one day walking up the aisle to the communion tables, when the precentor, seeing a person obstructing the passage, called out in the middle of the singing, "Stan' back, Jock, and let the noble family of Eglantine in"—and then in the same key and without stopping, he read out the line, "nor stand in sinners' way!" This custom of reading the line was suited to the times in which it was practised, but these times have now passed away.

The sermon had several characteristics, without which it would not have passed muster at all as a religious discourse, in the minds of those to whom it was addressed. It was always long, very long. One of the shortest then was equal to two of the longest now. From an hour and a quarter to an hour and a half, and even two hours sometimes, were expected and given. No matter what the subject might be, whether pregnant or barren of thought, necessity was laid upon the preacher, by whatever means he might employ, to spend upon its consideration the usually allotted time. Then the divisions and sub-divisions were almost infinite, and the saying about 8thly in the 17th place was no great exaggeration after all. This multiplicity of *particulars*, as they were called, arose, perhaps, not so much from the necessity of a right classification of ideas illustrative of the doctrines propounded, as from the extreme length of the discourse, this fragmentary manner of composition admitting great discursiveness of fancy by which abundant matter might be introduced without the fear of coming too soon to a conclusion. The winding up of the whole had also its several divisions of *lastly*, *finally*, in *conclusion*, and *one word more*. A third characteristic of the sermon was the peculiar tone in which it was delivered. This was called by various names, such as the "sough," the "whine," the "clerical wail," and the "drant." It was supposed to add considerable dignity and *unction* to the discourse, and was greatly approved of by the hearers. On the first Sunday after the ordination of a minister in the Cameronian meeting-house at Quarrelwood, the congregation at the close of the service remonstrated with the new minister, and insisted on his using the *drant* in which his predecessor had been a great proficient. However, he sternly refused, declaring he would preach in the natural voice which God had given him.

Considering the great length of the sermon, the heads, and particulars, and uses, and directions, into which it was broken up, the tone in which it was delivered, and the dry character of its composition, it is not to be wondered at that

the interest of the hearers often flagged, and a soporific tendency stole over the greater part of the audience. The sudden physical change of the body from a state of activity to that of rest, the quietude of the place, and the recumbent attitude often assumed as the text was announced, assisted in no small degree the influence of the drowsy god, to the great annoyance of the preacher. Various methods were adopted to put an end to the evil, with more or less success, but the effect was only temporary, as a Sunday or two afterwards showed the habit as inveterate as ever.

The Relief Minister of Auchtermuchty was one day preaching for his brother minister in Kettle after the communion there. The day was very hot, the church crowded, and a considerable number of the hearers were either nodding or fast asleep. The preacher felt this annoying, and had recourse to the following plan to rouse them. He took occasion to introduce the word *hyperbolic* into his sermon, and immediately stopping short as if he had used an improper word, he said,—“Now, my friends, as some of you may not understand this word *hyperbolic*, I will explain it. Suppose I were to say that the whole congregation in this church was asleep at the present time I would be speaking *hyperbolically*, because I don’t believe much more than the half of you are asleep.” This had the desired effect, for every one was roused, and the speaker went on as if nothing particular had occurred.

A former minister of Terregles was much annoyed by his people sleeping in church, and he resolved one day to put an end to the habit if possible. When he had reached the 3rd head of his sermon, he stopped suddenly in the middle of a sentence, and shut the Bible forcibly, saying “he had not composed his sermon when he was sleeping, and he did not mean to throw it away upon sleeping folk.”

The Rev. Walter Dunlop of Dumfries did not mince the matter in rousing the sleepers of his congregation. One day he paused in his sermon and said, “I see some o’ ye hac taen owre mony whey porridge this mornin’ Sit up and shake it aff ye.”

Strange as it may seem, we have heard of a preacher himself falling asleep in the pulpit while delivering his sermon. On the previous day he had been dining with a nobleman in the parish, and had afterwards played at cards with him till a late hour, when he returned home. Next day in the pulpit towards the end of his discourse, a drowsy stupor suddenly fell upon him, and he called out, "Hearts is trumps, my Lord," to the great amazement of the congregation, but immediately recovering himself, he exclaimed, "I say, let our hearts triumph in the Lord!" and thus adroitly got out of his awkward position. Sleeping in the pew is bad, but sleeping in the pulpit is worse; and when there is drowsiness in the one it is natural to expect nodding heads in the other.

As clocks and watches were not so common then as now, and as sermons were not read, the preacher had no idea how the time was going; a sand-glass was therefore erected on a stand in front of the precentor, whose duty it was when run out to hold it up before the minister as a hint that his sermon should come to a close. Though this piece of antiquity is not now found in our churches, a representation of it is occasionally met with in our churchyards on the gravestone of some forgotten worthy, where, along with pick and spade, it symbolizes the end of life and the grave.

After the blessing was pronounced the minister bowed from the pulpit to the principal heritors according to the right of precedence. Two heritors in the parish of Lanark so keenly disputed about the right to the first bow that the matter was referred to the presbytery, who forbade the minister to bow any more in the church, and admonished the two heritors with regard to their conduct for the future. Dr. Wightman of Kirkmahoe paid a very complimentary remark to Miss Miller of Dalswinton, who was greatly noted for her beauty, and who rallied the minister one day for not bowing towards her on the previous Sunday when she alone was in the family pew. "I beg your pardon," he replied, "but you surely know that angel worship is forbidden in the Church of Scotland;" and, lifting his hat, passed on.

The ordinance of communion, or the "preachings" as it was called, from the amount of preaching which attended it, afforded a favourable opportunity for the exercise of ministerial gifts of various kinds in the several addresses which were delivered. At the close of public worship on Saturday before the blessing was pronounced the minister himself entered the pulpit and gave some directions about the next day's worship. This done, then followed a long and minute recapitulation of the sermons which had just been delivered, as well as on the fast-day preceding. This was called "perlequeing," and was considered advantageous to the hearers, as bringing into a focus before them the lessons of instruction to which they had listened. Sometimes the sermons were found fault with and severely criticised. The minister of L—n, in Galloway, was accustomed to speak very freely when engaged in this duty. On one occasion he attacked the discourse which had just been given by an experienced clergyman, and tore it to shreds, declaring it heterodox and unsound. The people knew their minister's tendency, and paid no attention to it, and the preacher did the same.

The Sunday was the greatest of all the days in importance, solemnity, and outward excitement, several ministers arriving to assist in the work. As the pulpits of the neighbouring parishes were always thrown vacant on that day, the populations gathered in crowds, and were addressed from a tent in the churchyard, while the more solemn part of the duties was conducted inside the church. Sometimes, for the greater accommodation of the worshippers when the weather was favourable, the tables were arranged in the churchyard in front of the tent, and the whole services of the day were conducted in the open air. This had a solemnity and a sublimity not realised within the walls of the church. The simple mind looked up without obstruction to the heavens high above his head, and he felt the homage of his heart and the utterance of his lips rising in sweet memorial to the throne of God. The field of death around brought the worshippers, as it were, into closer proximity with their God, with the

great resurrection, and those kindred spirits who had gone before to the mansions above. There, seated on the green graves, or the grey tombstones, with the dust of generations beneath them, it required but little imagination to consider both dead and living listening to the Word of Life, or standing for judgment before the great white throne. The old trees around, venerable with age, like the Cedars of Lebanon, and the blue vault of heaven far above, gave additional impressiveness to the scene, and imparted a charm to the occasion which wrought a beneficial influence upon the hearer's heart. Besides, suitable topics were often suggested for discourse to those who addressed the assembly present. Some of the ministers were very felicitous in adapting their addresses to the peculiar circumstances in which they were placed, which always produced a solemnizing effect. The following is told by James Hislop, though not quite in his own words :—

On one of these occasions the Ordinance was just about to be dispensed in the churchyard of Sanquhar, which is picturesquely situated in the shade of aged trees, and surrounded with high hills. The long tables, covered with snow-white cloths, were filled with devout worshippers, while hundreds were seated around, waiting till they could be admitted in turn. The action sermon and other devotional exercises were over, and the minister at the head of the tables had read the latter portion of the 116th psalm, usual at such times, when an awful peal of thunder burst over their heads, echoing and re-echoing among the hills. All were struck with the profoundest awe, and held their breath till the sound had died away. It seemed as if the Almighty was giving an audible approval of the religious ordinance in which they were engaged. When all were hushed in death-like stillness, the minister addressed them in the following terms :—“ My friends, how dreadful is this place ! This is none other but the house of God, and this is the gate of heaven. He, before whom we must appear in judgment, from His pavilion of dark waters, and thick clouds of the skies, in a voice of thunder, is now addressing us, who are

assembled around His table ; and I have no doubt that if the thin veil by which we are separated from the invisible world were drawn aside, we might discover, among these dark clouds where the thunder is rolling, the throne of Him from before whose face the earth and the heavens shall flee away—we might behold on the mountains around us the bright armies of heaven, drawn up in their shining ranks, under the banners of the King of Righteousness—we might behold those who have joined with us at this table, whose graves are now rising green beneath our feet, but whose spirits are in glory. I say we might behold them looking upon us with heavenly joy and satisfaction, while we join ourselves unto the Lord in a perpetual covenant never to be forgotten." Every worshipper there might well remember that Communion season till the latest hour of life.

In Fencing the tables, what was called the *Debarring* was always lengthened and minute, while the *Invitation* was comparatively short and general. The *Debarring* was so called from the several classes of sinners addressed being solemnly *debarred* from approaching the ordinance. So minute and comprehensive was the enumeration of these classes that one would have thought the tables were prepared in vain, as none could be entitled to come forward with impunity. As a specimen of these *debarrings*, one clergyman is reported to have said—"I *debar* from these tables all those who use any kind of minced oaths, such as heth, teth, feth, fegs, losh, gosh, or lovenenty." No doubt the great object of such particularity was to preserve the purity of the ordinance and prevent the commission of aggravated sin, though there was a seeming inconsistency in what followed, the earnest persuasiveness in inviting and urging communicants to come forward and partake of the memorials of redeeming love.

While the church was filled in every part, pews, passages, and stairs, the tent was the great attraction, and the service in the churchyard began as soon as a considerable audience had collected, and was continued by relays of preachers till

the worship in the church was over, far towards evening. Those clergymen who did not require to use the MS. always got on well in the tent, for besides the stroke of popularity in not using the "paper," it was a great oratorical advantage to be able to lean over the *fauldbord* and glance at all around, making some allusion to the sleeping dust beneath ; while those who used the MS. had sometimes considerable difficulty in keeping it before them from the fitful gusts of wind that would rush in through the trees. We once saw the papers of a preacher in this position whirled out of the tent altogether, and as the stitching seemed to have given way, they were blown in various directions over the churchyard. The tent was immediately deserted by the surrounding audience, who ran in pursuit of the lost treasure, while the preacher acted as well as could be expected, and quietly gave out a psalm which was joined in only by the precentor and himself. As it was likely some time would be necessary to collect and re-arrange the "parchments," a message for another minister was sent into the church, while he engaged the audience in prayer till the required assistance arrived.

The performances of the various preachers were all freely criticised by the hearers on the way home when the day's duties had come to a close, and their criticisms were often of a peculiar character. Dr. Scott of St. Michael's, Dumfries, was once assisting at the communion in Urr, where the other officiating clergymen were great guns from Edinburgh. Though a distinguished preacher in the locality he greatly exerted himself that he might not be eclipsed by the strangers from a distance. He gave one of his best discourses as a table address, the subject of which was the resurrection, which he treated as possible—probable—certain. It commanded the most solemn attention and interest. In the tent he preached from the text "There is joy in the presence of the angels of God over one sinner that repenteth," and made a great impression. A little band of old women on their way home in the evening, shortened the road by discussing the merits of the several preachers who had address-

ed them, when a worthy dame who had not spoken before on being applied to for her opinion, gave it honestly thus:—
“Leeze me abune them a’ for yon auld, bell’d, clearheaded man that spoke sae bonny on the angels, when he said Raphael sings, and Gabriel strikes his goolden herp, and a’ the angels clap their wings wi’ joy. O but it was gran! It just put me in min’ o’ our geese at Dunjarg, when they turn their nebs to the south an’ clap their wings when they see the rain’s comin’ after lang drooth.”

The abolition of tent preaching on sacramental occasions was one of the greatest reforms in the Church of Scotland, and for this we are, in a great measure, indebted to Burns’s satirical poem “The Holy Fair.” The various descriptions theregiven of men and manners may be thought more plain than pleasant by some, but thousands can bear testimony to the truthfulness of his representations as having been witnessed in their own parishes on similar occasions. It is well known that in times not very long ago, when servants were engaged at the hiring fairs in the west of Scotland, at Ayr or Maybole, they always stipulated for a day either to Kirkmichael Sacrament or Ayr Races. Amusement was their object, and they made assignations with friends and sweethearts to meet at either of these places as might be most convenient, or where the greatest amount of enjoyment was likely to be found. The results of such gatherings we shall not seek to follow, but wish them blotted from the Church Court Records, and forgotten as if they had never been. So far as we are aware there is no such thing now in any of the Lowland parishes of Scotland. It is a thing of the past, and many of the present generation do not know it even by name. Would it had been always so! Doubtless the clergy did not allow, far less approve of, the indecorous scenes which then took place; and doubtless also they admonished, and exhorted, and rebuked in no lenient degree those accused of their participation, but nevertheless the custom continued to prevail with unabated vigour, and amelioration was scarcely to be hoped for, if it could only be

restrained from going further, supposing that possible. Burns was, however, longer-sighted. He saw the effect must continue while the cause existed, and therefore taking one of his sharpest pointed shafts he aimed at both, and the world can now testify as to the result.

When the tent at C—, in Ayrshire, was laid aside from further use, a discussion arose at an heritors' meeting with regard to its disposal, and it was unanimously agreed that the sides should be converted into backs for the communion-table seats, which heretofore had been only long moveable forms. The top, however, from its peculiar shape, presented a difficulty. There was no purpose to which it could be adapted ; but on the suggestion of one more liberal than the rest it was finally resolved to present it as a "hopper" to the parish miller. Had it been able to quote Shakspeare, it might have cried out in retaliation "To what base uses do we come at last !"

A FEW DUMFRIESSHIRE WORDS NOT IN *Burns* AND NOT
CURRENT IN OTHER COUNTIES, *e.g.* RENFREWSHIRE.

By Mr JAMES SHAW, Tynron.

Yaul	for	supple, clever.
Kir	—	tight, clean.
To Stell	—	to stick, to stand.
Bask	—	hard, dry, (applied to weather.)
To Chun	—	to sprout.
Reeves	—	sheep folds.
Channel-stones	—	curling-stones.
Wad	—	black lead pencil.
Caum	—	slate pencil.
To Trone (the school),	—	to play the truant.
Gellic	—	iron, pinch, or lever.
Lauchter	—	a brood, a litter.
To Buist	—	to mark sheep with the initials of the owner.

Stampcole	for	hay rick.	[districts.
Yaws	—	throat-disease peculiar to certain	
To Wear (a gate)	—	to open and shut it at sheep shearing.	
Hoshens	—	footless stockings, Renf. huggers.	
Bedstane	—	a flat stone used in a girls' game, Renf. Peever.	
Wented	—	soured, (an English north country word.)	
Launer	—	dressmaker.	
Hirsel	—	shepherd's flock, flock's pasture ground.	
Cosy	—	baby's cap.	
Pingle	—	pan.	
Snoysters	—	pork puddings.	
Sevendle	—	secure.	
Boiler	—	kettle.	
Steekers	—	shoe laces.	

In districts where manufactures and dense population have made several animals, &c., scarce, the following phrases are unmeaning, but are generally understood in Dumfriesshire yet :—

“Stinking like a brock.”

“As greedy as a gled.”

“As mad as an ettercap.”

“Reeking like a kilnogie.”

Stank-hen, heather-bleet, kaid, gowk, are understood; as also the phrase,—

“As blae as the blawart.”

A line of Burns unintelligible to a Renfrewshire man, I have found understood by Dumfriesshire peasants, *i.e.*,

“A daiman icker in a threave.”

Curious pronunciations of proper names in Dumfriesshire—

Frizzle	for Fraser.	Tremmle	for Turnbull.
Hodson	— Hewison.	Mingas	— Menzies.
Foster	— Forrester.	Dusdeer	— Durrisdeer.

The Sanquhar, the Keir is current, never *the Dumfries, the Thornhill*. The use of *as* for *than* is very marked, *e.g.*

“better as it,” for “better than it.” The word *of* is used for *some*, *e.g.*, “there were o’ them,” for “there were some.”

There is a marked difference in the pronunciation of vowel sounds, and the transposition of letters in Dumfriesshire from Renfrewshire, *e.g.*

Dumfriesshire hyame.		Renfrewshire hame.	
—	tüch.	—	tüch.
—	düch.	—	düch.
—	twäy.	—	twau.
—	reed (colour.)	—	rid.
—	teeming (emptying.)	—	tumming.
—	buddum.	—	bottom.
—	slid.	—	slippy.
—	shillying (<i>making grimaces.</i>)	—	showling.
—	shiny.	—	shinty.

POOR LAWS IN DUMFRIESSHIRE IN 1750.

By W. R. M'DIARMID.

THE existence of a portion of the population, either unable or unwilling to work for their living, the latter with a constant tendency to form part of the class not quite unwilling to work, but working by taking the fruits of the industry of others, has been a constant difficulty in almost every nation, and especially in old and densely peopled countries. Even in early times when the population of Scotland was sparse, vagrancy became a serious evil, of which we have a vivid description from the pen of Fletcher of Saltoun. In 1424 the Scottish Parliament passed an Act prohibiting all begging without a badge under the penalties of burning on the cheek and banishment, and in 1535 these penalties were extended to all who begged beyond the bounds of the parish of their birth : a repetition of these offences involved the extreme penalty of the law. About the end of the 16th century the execution of these acts was entrusted to the

Sheriffs and the Magistrates of Burghs. The case of the aged and disabled poor was dealt with by the Act of 1535, who were to be provided for by a tax levied in their native parish: and in parishes where the assessment and the voluntary contributions at the church-doors were not sufficient to maintain the poor they were allowed to beg, but not beyond the parish bounds. There is, however, reason to believe that these provisions were not strictly enforced in Scotland. For a systematic poor law in vigorous operation the country is indebted to the legislative labours of the present President of the Court of Session: the subordinate subject of vagrancy still requires to be thoroughly dealt with.

A description of the state of Dumfriesshire as regards vagrancy is given in a presentment by the Justices of the Peace in 1751, in which it is stated that notwithstanding the Act punishing by imprisonment and death vagabonds, sturdy beggars, sorners, or Egyptians, commonly called gipsies, for these many years past, and especially of late years, this shire and county hath been greatly infested by vagabonds, sorners, and Egyptians who frequent it and travel together in bands, occasioning great terror and fear to the inhabitants of the county, who are forced to give them quarters in their barns or kilns in order to save their houses from being burnt.

Soon afterwards in the same year the Sheriff-Depute took up the subject and convened a meeting of Justices and landed proprietors to whom he proposed a plan which had been found to work well in the county of Berwick. The meeting expressed their approval of the proposals made by the Sheriff, but delayed a final decision until the Duke of Buccleuch and Queensberry, the Marquis of Annandale, the Earl of Hopetoun, and Viscount Stormont, who have great property in the shire, be consulted. At a subsequent and numerous meeting of Justices and Commissioners of Supply and heritors, held on 6th August, the proposals of the Sheriff were ratified, though not without a division, a minority wishing to deal with vagrants only, while the majority

decided to provide for the home poor as well as meet the case of vagrants. The provisions adopted in Berwick were that every parish should maintain its own native poor by means of an assessment, the management of which was entrusted to the parish minister, and that all begging should be prohibited : that all vagrants should be ordered to depart by a certain day from the shire, and to enforce this district constables were appointed whose main duty was to apprehend and take to prison any such vagrants as might be found in the shire : the constables were also bound to see that the parish poor were properly attended to, and note down the names of persons who gave alms to vagrants.

Dumfriesshire was accordingly divided into eight districts, —two in the Presbytery of Penpont, two in Dumfries, three in Annandale, and one in Eskdale, and a constable was appointed for each district, at a salary of £4 sterling per annum, 2s. 6d. for every vagrant apprehended and imprisoned, 3d. sterling for each mile they carry them, besides a suitable allowance for any party that may be necessary for their assistance.

In September it was reported that at the different parochial meetings for taking into consideration the prosecution of the scheme for the poor, it had been found impracticable to levy an assessment, in consequence of the valuation of the lands of several considerable heritors being *in cumulo* ; and it was in consequence resolved in the meantime that the poor of each parish should be allowed to beg therein, being liable to be taken up as vagrants if they went beyond the bounds.

Peter Graham, in Hillside, was appointed riding constable for the whole county in general and for one of the Annandale districts in particular, and parish constables were also appointed : each of the district constables had general powers over the county.

In September, 1752, in consequence of the riding constables appointed for apprehending vagrants and strange poor being put to great inconvenience and trouble in hiring

horses for carrying such poor people as are unable to travel on foot to the prison, because the people in the country refuse to lend their horses unless they are paid at an exorbitant rate, the Justices granted warrant to the constables to press for horses for carrying vagrants to the Tolbooth of Dumfries, payment to be one penny for each mile and one penny half-penny if the owner sends a person along with the horse to take care of the same.

In June, 1753, a committee was appointed, which was to meet monthly in Dumfries, to look after the working of the measures regarding the poor, in consequence of a representation that the constables had not been so diligent as they ought to be. The committee was especially directed to consider the proper measures from time to time to render the said scheme effectual; and particularly to take into their consideration the conduct of the several parishes as to the maintenance of their poor.

Inconvenience having been felt in the county through the suppression of vagrancy checking the travelling tinkers and braziers, braziers who had a settled residence, could produce certificates of character, and find caution for good behaviour, were to be licensed to travel through the county and exercise their trade.

John Morrone, in Braccoch, was fined £5 for refusing to accept the office of constable for the parish of Keir: the money was apportioned for different purposes, among which were thirty shillings to Mr Riddell of Glenriddell to be applied for placing a mid pillar under the timber bridge at Crossford; and twenty shillings to the minister of the gospel at Holywood, to be by him applied towards the support of Mary Anderson, in that parish, disordered in her mind.

On 7th May, 1754, warrant was granted for setting Michael Lawson, a vagrant, and prisoner in the Tolbooth of Dumfries, at liberty upon his enacting never to be seen again within this shire.

In October, 1757, the Justices considering that by the blessing of God the harvest is happily gathered in and plenty

restored, and notwithstanding thereof sundry complaints have been made that the poor do not keep within the parishes to which they belong, and that vagrants, gypsies, and sturdy beggars are going up and down the country and become very burdensome, do therefor strictly enjoin the riding constables to put the instructions in relation to the poor, vagrants, and sturdy beggars into the strictest execution, and to take up and bring before some Justice of the Peace any poor that shall be found begging without the limits of the parishes to which they belong, to be by him committed to the county jail, therein to remain and to be fed on bread and water for such space as the Justice shall think reasonable not under five days: the constables are also enjoined to seize all vagrants, sorners, &c. If they are negligent in their duty they will not only be dismissed without payment of their salaries but otherwise punished. Copies of this resolution were ordered to be made out by the clerk, and read at the door of every church in the county by the parish constable on Sunday.

It would appear from this and previous passages that much difficulty was felt in dealing with the poor, and that no assessments were levied for the support of the parish poor, the difficulty in regard to *cumulo* valuation not having been got over. From the numerous entries of the appointment and swearing in of constables, some of whom were invested with staffs of office for which they gave a receipt, it would seem that the office was not coveted.

No point has been more fruitful of difficulty and litigation in the management of the poor than that of settlement. Under the old Scottish poor law the settlement was the parish of birth, and if that was not known the parish where "he has had his most common resort for the three years immediately preceding his being taken up, or his applying for the public charity." Here is a question which was raised in 1758. John Dargavel, weaver, represented to the Quarter Sessions that he was born in the parish of Penpont, where he lived thirty years; from thence he went to Glen-

cairn, where he resided one year ; and thereafter he went to Penfillan, in the parish of Keir, where he now resides. That he is now about to be removed from the parish of Keir, and is much diffculted about a place of residence, as he is denied admittance into the parish of Penpont, because he has been three years out of that parish. Which representation being considered by the Justices, they find, providing what is above represented be true, that the said John Dargavel hath just title to reside in the parish of Penpont.

The authorities had in these days another system in operation which was intended to benefit the poor : it was also one of repression, a restriction upon the internal trade of the county : its working will be seen from the following passage, of date 7th December, 1756 :—The Sheriff-Deputy and Justices of the Peace, taking into their serious consideration that notwithstanding this county in general was remarkably favoured in the last harvest by being blessed with good crops and good weather for cutting down and ingathering the same, so that by the mercy of God the harvest was in many places happily finished before the great storm of wind and the bad weather that followed it came on, so that we had no reason to fear a dearth of victual : yet that sundry wicked and evil-disposed persons have, with a view to their own profit and private gain, and to the great oppression of the poor, gone through the country and bought up at extravagant prices all the victual they could purchase, and thereby prevented the same from coming to public mercat, in manifest contempt and violation of sundry Acts of Parliament : and that if a stop is not immediately put to such practices there is great reason to fear that the poor may be reduced to hardship and the peace of the country endangered : All which being considered by the Sheriff-Deputy and the meeting, they declare that they will put the laws against Forestallers and Ingrossers of Victual into execution with the utmost rigour : and they strictly prohibit and discharge all persons within this county from buying or selling meal or any other kind of victual in any other place

than in some of the public mercats within this county, without a license for that purpose under the hands of two Justices of the Peace for the county, except it be in small quantities not exceeding four stones at a time for the support of labouring persons or the poor in their neighbourhood, and the constables and all other officers of the law are hereby strictly enjoined to give notice of any persons that shall presume to contravene the premises: and that no person may pretend ignorance they appoint a copy hereof to be sent to the minister of every parish within the shire of Dumfries, who is hereby required to read the same immediately after divine service on the first Sunday after it shall be delivered to him before dismissing of the congregation, and further appoint copies of this Act to be affixed upon the mercat crosses of the burghs of Dumfries, Annan, Lochmaben, and Sanquhar, and of the mercat towns of Thornhill, Minnyhive, Moffat, Lockerby, and Ecclefechan.

At the next meeting on the 11th of the following January, it was found that this Act was likely to become a hardship upon persons who have bear to sell for payment of their rents, and upon the maltsters in the country who used to buy, in regard bear has never been in use to be sold in public mercat except for seed only. It was therefor declared lawful for farmers to sell bear at their own houses to maltsters.

In a paper which was read at the last meeting of the Society regarding the condition of servants, it was shown that one of the qualifications of female servants was ability to brew, indicating a common use of home-brewed ale. The passage just read shows that there was a considerable manufacture of ale in the county in addition to the home-brewed. About this time an Act (29th G. II.) came into operation in Scotland levying a duty upon licenses for retailing ale, beer, and other exciseable liquors, which licenses were granted by the Justices. The number of licenses may be taken as some measure of the consumption of ale. There were 18 licenses granted for Moffat, 7 for Dryfesdale, and 10 for Hoddam.

THE APPRECIATION OF BEAUTY BY ANIMALS.

By MR JAMES SHAW, TYNRON.

THE question of the origin and preservation of vegetable and animal beauty is one which deserves more attention than it has yet received. We are assuming, of course, that the Beautiful exists, and that there is a faculty within us similar to what is called "an ear for music" in the case of melody, which is responsive to loveliness and prompts us to conserve what is grateful to the sight. This faculty of ours is as universal as an instinct. The lowest savage pays tribute to external beauty of colour or of form. His tattooed body, his head gaudily decked with feathers, his elaborately patterned weapons or articles of luxury have suggested to a great modern writer that the wild man's love of ornament rather than his desire of comfort has been at the origin of clothes.

Confucius, who lamented that personal beauty was preferred to virtue, only said what our preachers and moralists everywhere repeat. Wordsworth says that his heart leapt up when he beheld a rainbow in the sky—it did so when he was a boy—it did so when he was a man, and it did so with his grey hairs.

But if beauty merely existed for man—if he were the only creature for whom it had charms, then well might we wonder at the prodigality of nature, which, through all times and places, spreads this rich legacy, altogether heedless whether the most gifted of her sons be present to admire or not. It has been said in well-known lines :—

"Full many a flower is born to blush unseen,
And waste its sweetness on the desert air."

Yet not only in the solitudes of the tropical forest but in the awful solitudes dimly pictured out by the geologist or revealed betimes by the microscope, flowers, and colours, and patterns of symmetry exist in all their glory, far out of our reach in space or time, and accusing nature of waste or prodigality if man alone is supposed conscious of her charms.

And so we have a distinguished writer (see *Reign of Law*

by Duke of Argyll), removing the question from the naturalist to the theologian as formerly people did with the earthquake and the eclipse. Doubtless, we may believe that God makes his works beautiful to please himself, and yet try to find out whether the creatures are pleased with it as well.

For if in a thousand cases beauty is hid from human eyes, are we safe to assume or deny that it is hid from *all* eyes? Very many observations go to strengthen the notion that the inferior animals share with the lords of creation in rejoicing at the sight of their eyes and at the hearing of their ears. The infant who, in its nurse's arms, smiles and attempts to clutch the light, suggests comparisons with the moth or bird that often become victims to the same allurements. The lady who spends hours at her mirror, on her toilet, invites analogies with many birds and quadrupeds which show similar pride in personal decoration; and with the inferior animals as with man, the most loving and the most lovely are not the least distinguished for the development of these tastes.

Take, for instance, that gorgeous animal the Bird-of-Paradise. Naturalists, who have observed it caged, have given us many glowing accounts of its behaviour. It is said to spend hours surveying its splendid self, jealous lest the least stain should darken the glory of its plumage, while, stretching out its pinions, it cleans in succession every tuft within reach of its bill. Its admiration of its own image in picture or mirror elicited the wonder of the spectators. It has been observed to caw with satisfaction at the completion of its toilet, and look archly at the onlookers as if ready to receive all the admiration that it considers its elegant form and display of plumage demand, of which, says a naturalist, "it appears as proud as a lady of her full ball costume." The bird's vanity even acted as a check on its appetite, for it would not descend to these insects, which, thrown into its cage, alighted on the floor, lest its plumage should suffer a soil, and indeed never put its foot upon the ground, except to get into the water-dish for the sake of its ablutions.

It would scarcely be safe in presence of such testimony

to deny this lovely bird all æsthetical faculty. Evidently here too we have a connoisseur. The eye which is delighted with cleanliness, gracefulness, and colour, has its preferences. He who asks of what avail is beauty, of what avail are plumes of green and blue, of spangles of the ruby, or spangles of the emerald in the struggle for life, may be answered thus : if the love of beauty be so powerful in this bird as to neutralize the demands of appetite, we may well infer that at the pairing season the loveliest birds will be attracted towards each other, and thus the charms of beauty greater than that of strength secure for itself a perpetuity in the battle of life.

Mr. Montagu has well described the manner in which certain singing-birds, as nightingales, woo the females and draw them towards them by love-burdened ditties, conquering their mates, or exciting the preference of the females by their valour and their song. Mr. Montagu thinks that the ear alone is that by which the female selects its mate, but to this it has been justly objected that nature at this season is at as much pains to please the eye as to delight the ear. Every one must have noticed that wonderful renewal of ornament in plumage, that wedding suit, as the French call it, which spring bequeaths to all the feathered tribes, suggesting to the most superficial observers that fine feathers play a part similar to fine garments with a human bride.* What we have already said of the Bird-of-Paradise will have been understood by every one who has paid attention to the Peacock. We have admired the gracefulness of this bird's curving neck, its hues of gold and azure, green and brown, the eye-like or moonlike spots on its train dissolving or growing brighter—its metallic lustre intermixing with its gloomier tapestries, and the delicate crest of it faintly set with stars, but what is more to the point, we could not deny that the Peacock was sharing our feelings, that it was strutting about, and by means of powerful muscles was displaying itself to

* As with melody so with beauty the male generally far excels the female.

advantage, and that by its participation in human sentiments it has succeeded to make itself proverbial for ostentation and for pride. Both these animals are fond of a mirror, and the first became courteous to a picture of itself.

The great taste displayed in nest building—the passion which some birds, especially of the family *Corvidae*, have for glittering pieces, shining or brilliant metallic objects, and even for snatching up bits of burning wood (witness the Cornish Chough), and when possible storing past their acquisitions, seems to arise from a feeling equally prominent in the rude African and the nursery child, and common to many who are neither Africans nor children.

Not only do the magpie and raven exhibit their taste in proximity to human habitations, but in the solitary wilderness of America.

The Bower-bird of Australia is perhaps the most striking instance of the appreciation of beauty, the desire to conserve it, as any which we could select. Its extraordinary tunnels, which are its bridal chambers, are made with wonderful neatness of architecture, and the entrances profusely garnished with gay feathers of parrots, easily picked up in Australia, with sea shells, with pebbles, coloured bits of rags, or pottery, or whatever odd scrap that glitters which the animal can most readily pick up. In this tunnel it struts ridiculously until it attracts its mate, which, at the pairing season, it easily does, and then the two gallop in and out most merrily. When the colonists lose anything, they invariably look for it in these so called “bowers” or “runs,” just as we look a magpie’s nest in similar circumstances. The sea shells are often carried from afar and piled up in bushels.

The dazzling lustre and charming variety of colours in the eyes of animals, the profusion of ornament around the face and head, or in those parts either most readily seen or capable of being seen by erection or expansion, through means of powerful muscles, we can conceive to be due to natural selection working unconsciously, just as the bird-fancier brings out his favourite tufts and spangles by pairing the most suitable

animals. Among savages we find everywhere attempts to heighten the awfulness or splendour of the face, and even in civilized society the crown and the coronet, and the natural and artificial graces thrown around these parts of the body most readily noticed, are patent.

We have all observed the child's passion for flowers.* Can it be anything more than coincidence, or is it that beauty is attractive to the beautiful that humming-birds and butterflies are so often found hovering around flowers, which are their rivals in gorgeousness? It seems as if the conspicuousness and sometimes the form (as in the bee-orchis) of those gaudily-coloured petals, as Mr Darwin remarked, may be a decoy for the purpose of making insects the agents for intercrossing the seed. We have alluded to the allurements of light for certain beings, of which the French practice of *twirling for larks* is an example. In the case of the lark it may be replied that, although eagerly drawn towards the light by the epicure's invention that it has very little flame-colour, or any colour in its plumage, as might have been expected in a bird so easily victimised by its love of glitter, and selecting, from its devotedness to light, for long ages, for mates, the gayest of its kind. Other powerful laws in this country of soberest sunshine may have repressed the tendency, and the sexual charms seem to be expressed by northern birds more by the ear, and by tropical birds more by the eye. What the lark, although so sensitive to light, has failed to bring about has, nevertheless, been realized in the case of animals of another order to which we have already referred—namely, in the case of insects.† Those magnificent beetles, the fire-flies, the charm and wonder of the tropics, outshining our lunar-tinted glow-worm exceedingly, the blue cold light of which is ex-

* Dr. Grierson's monkey annoyed him by plucking his garden flowers.

† These are curious facts bearing on this argument :—

- 1st. In the asexual stages insects are not remarkable for loveliness.
- 2d. Those butterflies which habitually erect the wings have them beautiful on the under side, which is not the case with those insects which have not that habit.
- 3d. Male butterflies are generally most magnificent.

changed for a warmer yellow, and the source being the thorax, not the abdominal segments, are examples suitable to our purpose. Our male winged glow-worm has too little luminosity to receive the appellation of fire-fly. The fire-flies of Canada, and of the East and West Indies, are in millions. They are attracted into the houses by means of torches to destroy musquitoes, which they eagerly devour. They are enclosed in glass vessels for reading with at night. They are worn as ornaments in ladies' head-dresses at evening parties. Here, then, are facts worth comparing. The savage's adoration of light—the civilized man's confession of its beauty, distinct from its use, in his expensive illuminations when princes marry or victory is won—the insect's passion for it, which seems to intoxicate it and to overleap its more cautious instincts—until by long eager seeking, and selecting of the feeblest spark, those fairy tapers have been developed in its very organization in those regions where the sun conspired with the insect's own appetancy.

Space forbids us to take up the subject of the effects of light and loveliness of colour or form on quadrupeds, or we might tell some stories of pretty cats and vain apes in clothes.

Our deductions are but tentative, and by no means account for the grand phenomenon of vegetable and animal beauty, but merely afford hints as to its agency and development. Beauty is wide spread, but so, be it recollected, are eyes—eyes fashioned after a manner wonderfully like our own, and, no doubt, having preferences in the things which they see. Low down in the kingdom of nature, in star fishes, in molluscs, we still meet with the optic nerve and the faculty of sight; and if beauty be a solace, beauty meets those eyes even when the waves and billows hide it from the sight of man.*

* Sticklebacks and lizards, for instance, brighten in colour with love or victory, and wane greatly with terror or defeat.