

THE TRANSACTIONS

AND

JOURNAL OF THE PROCEEDINGS

OF THE

DUMFRIESSHIRE & GALLOWAY

NATURAL HISTORY

AND

ANTIQUARIAN SOCIETY.

SESSION 1866-67.



DUMFRIES:

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

1869.

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JOURNAL OF THE PROCEEDINGS

OF THE

*Dumfriesshire & Galloway Natural History and
Antiquarian Society.*

November 6th, 1866.

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

Sir WILLIAM JARDINE, Bart., in the Chair.

The Secretary read the Annual Report of the Progress of the Society.

The Report of the Committee of Management, preparatory to the Annual Meeting, was read.

It was intimated that Mr Clark of Speddoch had consented to accept the office of Vice-President, and to give the address in room of Mr M'Diarmid, who retires in order of rotation. The appointment was unanimously agreed upon. Mr M'Diarmid agreed to associate himself with Dr Gilchrist in the management of the Summer Excursions. Dr Starke, Troqueer Holm, was appointed Curator of the Museum in room of Mr Gibson. Mr W. T. Gibson, Mr T. Jackson, Nith Place, Dr Grierson, Thornhill, were elected Members of Committee in room of those who retire by rotation.

On the motion of Mr Corrie, P.F., a Committee, consisting of the Secretary, Mr Corrie, and Mr Mitchell, Courier Office, was appointed for the purpose of revising and correcting the List of Members on the Roll of the Society.

The Treasurer submitted an Abstract of the Income and Expenditure of the Society for the last year, which was audited and found correct ; it is to be prepared for publication and to be on the table at next meeting.

The President suggested that in future the places of meeting for the whole Summer Excursions should be fixed at the close of the winter session, which was unanimously agreed upon.

Some discussion took place upon certain indications of Iron Ore in the district of Dryfe, in Annandale ; and Mr M'Diarmid referred to borings for Minerals which were at present being carried on in the neighbourhood of Ruthwell. Mr Hastings, taxidermist, exhibited a small collection of rare Birds which had been procured in the neighbourhood.

December 4th, 1866.

The Society held the second meeting of the Session in the Assembly Street Club Rooms,

Mr STARKE, Troqueer Holm, in the Chair.

The following Members were then enrolled :—*Ordinary Members*—Mr John Morin, Leadhills ; the Rev. George Murray, Balmaclellan Manse, New-Galloway ; the Rev. Mr Mackie, St. Mary's, Dumfries ; Dr M'Nab, Crichton Institution ; Dr Carlo Muland, Crichton Institution ; Mrs Henry Gordon, Moat Brae.

On the motion of Mr Starke, a vote of thanks was given to the gentlemen of the Assembly Street Club for the privilege they kindly gave to the Society of meeting in their present room.

Mr Starke read a report of the state of the Society's Museum, which gave rise to a conversation relative to the aims of the Society in that direction. After which Mr Starke moved "That the attention of the members of the Society be directed to the propriety of the extension of the Library and Local Museum." This was seconded by Mr Corrie, P.F., and agreed to.

Mr M'Diarmid delivered the Annual Address, after which a vote of thanks was proposed and cordially received.

Dr Gilchrist read a paper communicated by Mr J. N. Scott, Rector of Tain Academy, describing an Albertite Vein on the eastern slope of Ben Nevis, with the evidence which its contents afford of the organic origin of that mineral. He also read an account of the discovery of a supposed Fossil Reptile. Both papers gave occasion for considerable discussion.

The Society then adjourned.

January 8th, 1867.

The Society held the third meeting of the session in the Assembly Street Club Rooms,

Mr M'DIARMID in the Chair.

The meeting had been postponed for one week in consequence of the first Tuesday of the month being New-Year's-Day.

The following Member was enrolled :—*Ordinary Member*
—The Rev. John Caldow, Palmerston.

Mr M'Diarmid read extracts from the records of an old criminal trial which took place in the Court-House of Dumfries in the year 1727.

Dr Gilchrist read notes on the Druid Circles on Goldielea Hill. He also presented to the Museum of the Society some specimens of Minerals and Fossils, all local.

Dr M'Nab explained and exhibited in the microscope a series of Blind Beetles from caves.

After these papers were read a discussion ensued on the propriety of inviting the British Association to visit Dumfries. The proposal was generally approved of. Suggestions were made as to the best methods of carrying out the objects of the Society so as to secure the greatest amount of information to the Members.

The Society then adjourned.

February 5th, 1867.

Mr STARKE, Troqueer Holm, in the Chair.

The Society held the fourth meeting of the session in the Assembly Street Club Rooms.

Dr Grierson, Thornhill, read a paper descriptive of fragments of an ancient Stone Cross found by him, and which had been built into the wall of a house in Ayrshire. The paper was accompanied by drawings and sketches, and Dr Grierson entered at some length into the various characteristics of the tracery and carving found on such relics.

Mr Thomas Carlyle of Waterbeck read an elaborate paper upon the "Debateable Land," its boundaries, and the successive changes which had taken place in the families occupying it. Mr Carlyle was requested to prepare his paper for publication, and to communicate to the Society his further researches.

Dr Grierson, Thornhill, read a paper entitled "Modern Theories in Science." The paper called forth a number of questions and objections from some of the members present, but owing to the lateness of the hour the discussion was postponed until a future meeting.

The Society then adjourned.

March 5th, 1867.

The Society held the fifth meeting of the session in the Assembly Street Club Rooms.

The following Member was enrolled :—*Ordinary Member*—Dr Robert Trotter of Dalry, Galloway.

Mr Starke, Troqueer Holm, read a paper entitled “The Sands of Dumfries in 1508, or the Raid of Lammas Eve,” giving an account of a feud between the Maxwells and the Sheriff of the County and his deputies, in which the latter were discomfited.

Dr Grierson, Thornhill, exhibited a specimen of the White Hare, found last winter on Queensberry Hill, and entered at some length upon the question of the modification or variation of species, and the length of time required to produce changes which might be regarded as specific. While leaning to the belief that the specimens exhibited were varieties of the *L. timidus*, modified by the extreme cold of the season, he indicated his opinion that structural changes of greater importance were apparent which rendered the question doubtful, and which certainly approximated the specimens found on Queensberry Hill to the *L. variabilis* or Alpine Hare.

The Society then adjourned.

April 2d, 1867.

Mr STARKE, Troqueer Holm, in the Chair.

The Society held the sixth meeting of the Session in the Assembly Street Club Rooms.

Mr Niven, Leadhills, read a paper upon the Mines and Mining Operations at Leadhills, to be followed by a second paper at the next meeting.—Mr James Shaw, Tynron, read a paper on some popular errors regarding the habits of animals.—The Rev. David Landborough read a paper founded

on an interesting series of personal observations on the influence of situation upon climate, regarded from a botanical and zoological point of view.—Dr Gilchrist gave a report on the present excavations at the Gasworks, Dumfries, illustrated by diagrams of the successive changes which must have taken place in land and sea at the place indicated.

Specimens of Pines cultivated in Dumfriesshire were exhibited ; and a fine specimen of Antimony from the recently discovered mine at Glendining, near Langholm, sent to the Museum, was exhibited.

The Meeting then adjourned.

May 6th, 1867.

Mr M'DIARMID in the Chair.

The Society held the seventh meeting of the Session in the Assembly Street Club Rooms.

Mr Niven, Leadhills, read a continuation of his paper upon "The Mines and Mining Operations of Leadhills," and exhibited and presented to the Society a series of specimens illustrative of the process of the extraction of the pure lead and of the various minerals associated with the lead ore.—Mr Carlyle, Waterbeck, read a paper on the Border History entitled, "The Armstrongs and their Contemporaries."—A brief description of an ancient battle-axe, found in the old castle of Morton, was read.

The Society then adjourned.

At a meeting of Committee, held in Assembly Street Club Rooms on April 17, the following places of meeting for the summer excursions of the Society were proposed and

agreed upon, and it was suggested that a *card* should be issued at the commencement of the summer session intimating the places of meeting :—

Langholm, May 16th.

New-Galloway, June 6th.

Newton-Stewart, July 4th.

Kirkcudbright, August 1st.

Kirkconnell and Newabbey, Sept. 5th.

Caerlaverock and Wardlaw, Oct. 3d.

ABSTRACT OF TREASURER'S ACCOUNTS.

YEAR 1866-7.

<i>Dr.</i>				
1866-7. By Balance in hand from last year . . .	£4	9	7	
By Arrears recovered . . .	. 1	15	0	
By 107 Subscriptions for 1866-7 . . .	. 26	15	0	
By Price Copies of Transactions . . .	. 0	2	6	
<hr/>				
<i>Cr.</i>				
1866-7. To 14 Subscribers withdrawn or removed . . .	£3	10	0	
To 17 Arrears . . .	. 4	5	0	
To Secretary and Treasurer's Outlays . . .	. 3	14	0	
To D. Blaylock delivering Circulars . . .	. 0	12	0	
To J. Douglas for attendance . . .	. 1	0	0	
To Anderson and Son for Receipt Books, &c. . .	. 0	17	6	
To R. Johnstone, Printer . . .	. 3	5	0	
To <i>Courier</i> Office, printing "Transactions" . . .	. 15	8	6	
To Cash in Treasurer's hands . . .	. 0	10	1	
				£33 2 1
				£33 2 1

ADDRESS OF THE VICE-PRESIDENT,

JAMES STARKE, F.S.A. SCOT.

3d December, 1867.

By the death of Mr Maxwell of Breoch, this Society has lost an honoured member,—and it is always with deep regret that such a loss occurs. Other deaths amongst us there have been during the past year which may call for commemoration ; but the present I name here, as we were naturally disposed to look forward to the anniversary address which he would give, and was so well able to give, out of his ample stores of local knowledge.

On the present occasion, and in pursuance of the task which has devolved upon me, what I purpose to do is to confine myself to one branch of the Society's operations ; and throw together in a connected form the notices I have met with of objects of antiquarian interest discovered in the district, prefacing the notices with some remarks on the study itself.

The subject and title of this address will therefore be

ARCHÆOLOGY,

OR THE STUDY OF ANTIQUITIES ;

—its place in the operations of the Society.

In the prosecution of this subject I will ask your attention to three points :—

1. The relationship or connection between Archæology and the other objects of the Society.

2. What is comprehended in Archæology, or the study of Antiquities ; and

3. What are the principal articles of Antiquarian interest in the Society's district.

This Society professes to have in view two objects—Natural History and Antiquities. But for practical working, it seems more convenient, and also more agreeable to the constitution of the Society, to distribute its objects into three branches or departments—namely, *Geology*, *Zoology*, and *Archæology*.

Geology, with Mineralogy and Palæontology, has in view the material earth, with all its ingredients and conditions ; *Zoology*—taking that term in a large sense,—is the department of *life*, whether of plants or animals ; and *Archæology* regards physical objects as they bear the marks of human skill and intelligence.

This extended use of the term *Zoology* is not altogether unauthorised. For, besides its etymological derivation, and our own word *Zoophyte*, meaning an animated plant, to describe a class of beings which partake both of the *plant* and the *animal*, we find the poet Theocritus describing ivy, in what we call its fresh and green state, as *living ivy*.

In these three departments so understood, the *first* is the department of *still nature*,—the great theatre of action, where life, in all its wondrous variety, displays itself ; the *second* department is that of *animated nature*, where life is to be seen in all its forms, from its first rudiments to its highest developments ; and the *third* is the department of *antiquities*, where we are to examine all that bears the marks and impress of human skill and intelligence—the skill and intelligence of the highest order of the animal creation.

By this threefold distribution of the objects of the Society, a department may be assigned, with, perhaps, great beneficial effect, to each of the three Vice-Presidents,—one of them

taking the department of geology, another the department of plants and animals, and the third the department of antiquities.

The department of antiquities, or Archæology, has regard, as I have said, to all that bears the marks and impress of human skill and intelligence. This is a wide and large field, and, as often happens in such case, the small and the portable, which can be readily moved about and examined at leisure, are the most frequent objects of attention.

In this way, the small becomes great and important. It acquires prominence, and the study of antiquities has thus been assumed to be the study of trifles,—antiquarian trash. This is a narrow view of the subject; as there is enough within its range to occupy minds of every power. The subject is calculated to gratify a wide spread curiosity,—a curiosity which is common and general, and therefore also, it is probable, a natural and reasonable curiosity, respecting the past. It is a useful if not an indispensable help and aid to historical enquiry, and a knowledge of the past. And it is calculated to advance our knowledge and improve our taste by a comparison of the past with the present. Moreover, the study of antiquities combines book learning with outdoor exercise; while, in common with the study of Natural History, it engenders a habit of attention and careful observation. It is thus, in an especial manner, the occupation of learned leisure,—the occupation of educated leisure.

And though still dealing with *matter* and *material things*, we find these fashioned and animated by human thought and skill. The forest and the quarry have sent out their monuments of sculpture and architecture, and the rough mineral has become a gem—a precious stone.

When we proceed to examine into any object of antiquarian interest, several courses, or methods of enquiry, present themselves. For, we may enquire, in the first place, *at what time*, actual or probable, it was executed. This is the chronological method of enquiry, and it divides itself into ancient, modern, and mediæval.

Or 2, We may enquire *by whom*, or by what people, it was executed. This is the ethnographical arrangement. And under it, the whole course of our history is opened up :—the ancient and earliest inhabitants, Celtic and Romanized. the Anglo and Scoto Saxons, the Anglo Normans, and the English,—with the different eras, families, and individuals, distinguishing between the Scottish and the Anglican people, and again discriminating from all, the people of the South, and South-west of Scotland.

Or 3, We may enquire the scientific arrangement. But here, no doubt, we encounter a difficulty from the great diversity of the objects to be arranged, and also sometimes the condition in which oftentimes they are at first discovered. But, for our present purpose, it will suffice to adopt a simple and obvious arrangement,—distributing the objects into 3 classes :—

1. Fixed Structures,
2. Portable Articles, and
3. Philological and Psychological Matters.

Under the head of *Fixed Structures*, would be included Buildings of all kinds, lay and ecclesiastical, public and private. Temples, Churches, and Abbeys, Roman Stations and Encampments, Castles, Towers, and Dwellings, Roads, Bridges, and Dykes, Barrows, Cairns, and Tumuli, with Sepulchral cists, Monumental Effigies, Crosses, and Obelisks.

Under the head of *Portable Articles*, would fall—Implements and Utensils of all kinds, civil and military ; Articles of Furniture, Dress, and Ornament ; Money, Coins, and Medals ; Boats and Canoes.

And under the head of *Philological and Psychological Matters*, would fall—Local Dialects and Names, Local Customs and Usages, Legendary Tales, Libraries, Books, and MSS.

Some arrangement and classification is at once indispensable and advantageous,—and that which we have adopted is simple, and yet comprehensive enough, for all ordinary purposes, and will conduce to a clear understanding of the objects of our study.

We have now gone over in a rapid way *two* of the three points to which I requested attention—namely,

1. The relationship or connexion between Archæology and the other objects of the Society, and
2. What is comprehended under Archæology or the study of antiquities.

We are now to advance to the remaining—which is also the most interesting branch of the subject ; and that is, the area or district of the Society's operations, and the different objects of interest discovered within its bounds.

The area or district of the Society is expressed in the name or title of the Society—Dumfries and Galloway. This district is well defined,—having on the N. and E. ranges of hills, and on the S. and W. the Solway and the Irish Sea.

It is computed to extend to about 130 miles from E. to W.

This space is intersected by rivers, which divide it into *dales*,—the Esk, the Annan, the Nith, the Dee, and the Cree. And it has numerous lochs, morasses, and mosses, which must have made the district in former times very different from what it is now.

The earliest inhabitants of the district of whom we obtain definite and detailed information were Celtæ or Gauls—two tribes of whom inhabited the district, the *Novantes* in Wigtownshire and the *Selgovæ* in Kirkcudbright and Dumfriesshire. These we accordingly reckon the earliest inhabitants, and all early remains in the district, of which no farther account can be had, we denominate *Celtic remains*. We use this general language because our information is vague and general.

Our historical records begin, in a manner, with the Roman writers, and at the time of the Roman invasion the population was mainly Celtic, and of the same people that inhabited Gaul. Both had the same customs, the same language, and the same names of places and persons. It has accord-

ingly been held by many that the Celts in the two divisions of the *Cymry* and the *Gael* were the earliest inhabitants. Yet a more extended examination into the names of hills, rivers, and other permanent objects of nature may shew a pre-Celtic people to have been here.

One of these early remains, and probably the most extensive in the district, is

THE DEVIL'S DYKE.

This appellation, Fosbrooke says, is indicative of fortification lines; for the term *Devil's Wall* is applied to one of the Romans, on the left bank of the Danube. Yet here, perhaps, the name may be taken to express our ignorance of the present structure, its builders, and its purpose.

The course of the Dyke appears to have been first traced by Mr Train, the antiquarian correspondent of Sir Walter Scott,—and a detailed account of it, furnished by Mr Train, is given in Nicolson's *History of Galloway*.*

Generally the Dyke appears built of stone, but where a supply of stones could not be had it was composed of stone and turf. Like other ramparts of a like kind, it had a fosse on one side, and probably a path to facilitate communication on the other. The remains of this ancient work have been traced from Loch Ryan to the N.E. border of the Stewartry—the whole length of its devious course through Galloway being upwards of 50 miles. After leaving the Stewartry it enters Dumfriesshire, and passing through a part of that county joins the *Briton Wall* in the parish of Annan. It afterwards runs into the Solway nearly opposite to Bowness, in Cumberland.

The original height of the wall cannot now be ascertained. At its base its breadth is 8 feet, and on the N. or inland side is the fosse, which takes sometimes a circuitous direction, apparently to include fertile or cultivated lands. From this

* Vol. 1, p. 99 and 141, and the Appendix, Note B.

situation and character of the fosse, the rampart has been supposed the work of a people inhabiting the south side, and built in some way to arrest the inroads of some northern foe.

In the account referred to, the several lands and farms through which the dyke passes are stated in detail.

At a later period a portion of the Dyke was examined by Mr Vere Irving. He started from the farm of Gateslack, in the parish of Durrisddeer, and on ascending the hill above it he soon came up to the Dyke clearly and distinctly marked, running along the face of the slope.

An account of this examination, with remarks and historical conjectures respecting the structure, is inserted in the Proceedings of the Society of Antiquaries.*

Mr Vere Irving's idea appears to be that the Dyke was erected not so much to prevent the *inroad* of enemies and freebooters as to prevent their *escape* and return with the cattle they had seized. The Dyke would thus be in the nature of a great cattle trap.

Another extensive work in the district is

THE GREAT ROMAN ROAD

through Dumfriesshire from the south.

Scattered notices of this Road occur in the Statistical Account, according as vestiges of it appear in the different parishes. As also notices of the Roman Stations and Encampments, tumuli, and relics found in its course.

In the Account of the parish of Eskdalemuir there is a description of the Camp there. And in the Transactions of the Society of Antiquaries† there is an account of the great Camp at Burnswark, in the parish of Middlebie. And in the Proceedings of the same Society‡ are notices and figures of Roman Altars and other relics found near the Camp at Birrens, and presented to the Society by Sir George Clerk of Pennycuik.

* Vol. 5, p. 189.

† 4to, Vol. 1, p. 124.

‡ Vol. 3, p. 141.

One of these relics is a full length figure (supposed the goddess Brigantia), wearing a mural crown, with a spear in one hand and a globe in the other, and on the base below the figure is an inscription. Another of the relics is an altar to Mercury, with emblems and an inscription. Another relic is the sculptured head of a female statue. And another is a pedestal or altar—which when first discovered was a portion of a statue apparently to Mercury.

At a meeting of the Society of Antiquaries, 9 April, 1866, four Roman altars from Birrens were exhibited by the Senatus of the University of Edinburgh.

About a mile above the church of Durrisdeer vestiges are observed of a Roman Camp, a summer station in connection with the great one at Tibbers.

These two structures—the Devil's Dyke and the Roman Road—are the two great ancient structures of the district. But the Society has not yet had any special excursion for their inspection and examination.

We come now to other ancient structures, but of a much more limited extent.

The first of these are the Stone Circles.

MEGALITHIC CIRCLES, OR "DRUIDICAL CIRCLES."

These are also of an early date. The stones stand upright in a vertical position, and appear to vary in number, size, and appearance. The circles they enclose also vary in extent or compass, and sometimes there are two or three concentric circles with an intermediate space between each—a stone, supposed for an altar, being also often found in the middle of the interior circle.

In a few instances also lines of stones occur in the nature of alleys or avenues leading to the circles.

The most marked instance of this arrangement in England was that which formerly existed at Abury.

At Callernish, in Lewes, is an example of a Scotch Me-

galithic Circle with its avenue still standing. See Proceedings of the Society of Antiquaries, vol. 6, Appendix p. 20.

The Holywood circle is a good example within easy reach of the Society, and the name, the neighbourhood, and tradition all concur in assigning to the place, in ancient times, an extensive grove—which was a favourite locality for Druidic rites.

Eleven massive stones still remain, and the circle formed is about 80 feet in diameter.

In a very elaborate paper by Professor Simpson on ancient sculpturing on stones, the author says—At one side of the circle and somewhat within the circuit of it, 3 or 4 stones appear to me the prostrated remains of a cromlech and its supports. The cap stone has running across its back 4 oblique rows of cup-like excavations, some of them round and others irregularly elongated in form. One of the fallen props is similarly marked. It would be important to note accurately if the various strings of cups correspond in any degree with natural lines in the stones. See Proceedings of the Society of Antiquaries, vol. 6, Appendix p. 24.

By far the most magnificent megalithic circle in the North of England, says Professor Simpson, is that of Salkeld in Cumberland. It is formed of 67 stones, some of them of very great size.

In excavating in the interior of a stone circle in the island of Arran, a flat stone was found measuring 4 feet 2 inches by 3 feet 9 inches; and on removing the stone a cist was disclosed containing four flint arrow heads, and an urn, in which was a handful of black earth, apparently the only remains of the personage there deposited. In the interior of another circle in the same locality, another stone cist was found; and at a distance of about 3 feet off from this was another stone cist, containing a human skull and some long bones, with two flint arrow heads.

It thus appears that the stone circles were used, among other purposes, as places of sepulture. See Proceedings of the Society of Antiquaries, vol. 4, page 506 *seq.*

In our Transactions we are favoured with two papers on the stone circles: one by Dr Dickson respecting the markings on the Holywood circle; and this paper is followed by one from Dr Gilchrist on the Druid circles visited by him near Inverness.

In some supposed connexion with the stone circles, are the "Rocking Stones," which are boulders or blocks of stone so nicely poised that a slight pressure with the hand will move the stone, although the united strength of many men would be required to displace it, or convey it to a distance. These Rocking Stones are said to have been effected by the Druid priests to deepen the awe of the people in their power—thus taking advantage of their sacred character and of the easy credulity of an ignorant age.

In a late excursion our Society had an opportunity of inspecting the Rocking Stones on the Kells range. But on examining them they do not appear to be the work of man, but formed by the operation of natural causes only. If this be so, and if other examples in the district be of the same description, our Rocking Stones are not antiquities, but natural curiosities; and, in point of interest, they are inferior to the slabs with foot prints at Corncockle. These bear traces of animal life; but neither of them fall within the range of the Antiquary.

Among the ecclesiastical structures of a Christian character

THE ABBEYS

founded by the princes of Galloway must have formed a noble series—not on account of any sculptured devices or architectural decorations, but as magnificent piles. The earliest was the Abbey of Drundennan, founded in 1142 by Fergus, Lord of Galloway. It was erected for the White Monks of St. Bernard, and they were brought, like the Monks of Melrose, from the Abbey of Rieval in England.

The foundation charter of Melrose was dated in June,

1136, and the confirmatory charter by Prince Henry was in 1148. In the interval Dundrennan was founded, and it would not be strange if both Abbeys had the same architect. On the west wall of the south transept of Melrose Abbey is an Inscription Tablet to the following effect, and to which reference is made in Nicolson's Galloway as indicating "the Architect who designed and superintended the building of this Abbey." Vol. 1, p. 170.

"John Morrow sum tym callit was I, and born in Parys certainly, and had in keyping al masoun work of santan droys, ye hye kyrk of Glasgow, Melros, and Pasley, of Nydysdail and of Gallway."

Dundrennan Abbey, in the form of the structure, is built in the form and shape of a cross, lying E. and W., yet not due E. and W. For as yet the *mariner's compass* and the polarity of the *magnet* were not discovered. The position of the sun at mid-day was the standard then adopted.

On the S. of the church is the cemetery ground surrounded by the chapter house, cells, and stores; and it contains some interesting monuments, though they are now in a broken and dilapidated condition.

An interesting account of Dundrennan Abbey was printed for private circulation by the Rev. Mr Hutcheson,—a review of which, with extracts, appeared in the *Dumfries Courier* of 29th June, 1858.

The other Abbeys founded by Fergus, Lord of Galloway, were—

THE ABBEY OF SOULS SEAT,
THE ABBEY OF WHITHORN, and
THE ABBEY OF TONGLAND,

all of which were erected for monks of the Premonstratensian order. And

as a cell or priory of the Abbey of Holyroodhouse—in which Abbey of Holyroodhouse Fergus died. He had risen in rebellion against the King, and being defeated and subdued he was compelled to become a shorn monk there, where he succumbed and died in 1160.

In the old churchyard of Galtway, near Kirkcudbright, there is an enclosed burying ground of the former proprietors of St. Mary's Isle priory; and on a late occasion we had an opportunity of inspecting here a portion of the tombstone of one of the commendators, which still remains,—but the only parts of the inscription decipherable were the commencing words "*Hic jacet*," and the letters "M.V.," or 1500.

Uchtred, the son of Fergus, Lord of Galloway, founded

LINCLUDEN

for Benedictine Nuns. But this was changed into a provostry with *Bedesmen*, in the reign of K. Rob. 3.

These collegiate churches were in nowise connected with educational purposes. They were erected for divine worship and saying masses for the souls of the founders and others.

Roland, son of Uchtred, founded

GLENLUCE IN 1190

for Cistertians, like Dundrennan.

And Dervorgille, the daughter of Alan Lord of Galloway, who was the son of Roland, founded the monasteries of

DUMFRIES AND DUNDEE

for Franciscans or Greyfriars.

With respect to the monastery of Dumfries—now extinct,—it would be interesting to have a plan or diagram of the structure shewing the disposition of the grounds and apartments, and it would be a favour to be furnished from any member of the Society with a paper on the subject.

Dervorgille also founded

WIGTOWN ABBEY IN 1267,

for Dominicans or Blackfriars, and

SWEETHEART OR NEW ABBEY,

for Cisterians, like Dundrennan.

This Abbey perhaps received its name of *New Abbey* in contradistinction from her old Abbey of Dumfries in its neighbourhood.

Thus ended the long line of munificent foundations in Scotland by this princely family. And to them is to be added—Baliol College in Oxford, which, in its benefits at least, subsists to the present day.

Perhaps some member of our Society will show the advantages of these Abbeys on the social condition of the country while they existed.

Of the *Parish Churches* of old times, we have few remains. But what is now the burying place of the Terregles family, constituted formerly the *choir* or chancel of the previous church of Terregles. And among other relics which it contains is a carved chair of oak, which belonged to the Provost of Lincluden College. See statistical account of Lincluden, par. of Terregles.

In the month of June, 1865, the minister of the parish of Parton presented to the Society of Antiquaries the oak *pulpit* which had been in the old church of Parton, from which it was removed on the erection of the new church in 1834. The pulpit consists of longitudinal panels carved with an interlaced ribbon; and on the centre of the panels is carved in relief the words *Feir the Lord and honour his hous*.

Half the old church remains also in this case. But here, too, it is now used as a burying place of two of the heritors of the parish. See Statistical Account, par. of Parton.

The late church of Kirkcudbright, built in 1730, stood on the spot previously occupied by the church of the Gray

Friars. And a portion of this, which is called the *old aisle*, still remains.

And the walls of the old church at *Buitle* still remain, covered with ivy, and forming, in its ruin, an object of picturesque beauty.

In the ancient churchyard of Dunrod, near Kirkcudbright, are portions of a large stone *Cross* and a stone *Font*, conjectured to have been used in pre-Reformation times. One of the arms of the Cross is set up as the head stone of a grave. We shall afterwards notice some other crosses found in the ruins of old churches.

The structures to which we have been adverting—namely, the ancient stone circles, the Abbeys, and the pre-Reformation Churches—we class together as of an ecclesiastical character.

We come now to those of a civil or lay origin—the ancient Forts and Castles.

In one of our late excursions we visited the site and remains of the *old British Fort, Caerbantorigum*, on the farm of Drummore, near Kirkcudbright. This fort is the most important, for size and strength, of the numerous British strongholds with which this part of Galloway is studded. It is supposed to have formed the last refuge of the *Selgovæ*, and there are not wanting traces that it was subsequently occupied by the Romans, who would appear to have altered the shape of its defences, from the round to the square.

The Rev. Mr Fosbroke, in treating of the forms of Camps, says, “I venture to conclude that camps of three or more *valla*, or of capricious form, and only one or more oblique entrances, are, or originally were, of Celto British construction. If four or two entrances are made straight through the *vallum* either lengthways or across, and opposite to each other, and alterations and attempts have been made to square the outline, such camps may be presumed to have been of subsequent Roman occupation.”

The site of the fort of *Caerbantorigum* is in extent about 60 paces E. and W., and 37 N. and S. The fort was sur-

rounded by walls or ramparts of earth and stone, and by a double fosse. The hill on which the fort stood commands an extensive prospect.

The banks of the Dee, which formed the boundary between the two British tribes of the *Selgovæ* and *Novantes*, afford numerous marks of the ancient British Forts.

The *Castles* in the district were numerous, various, and many of them important. But if we except the castle of Dumfries, all of them seem to have been private property, the strongholds of particular families, and not public or national property.

Dumfries itself may not form an exception. But we read that on the memorable day of Comyn's death it was occupied by the Justiciars of Galloway holding their circuit court there. Yet in its origin the castle of Dumfries appears to have been a stronghold of the Lords of Galloway, like the castle of Loch Fergus and the castle of Buittle; and the site on which the black Douglas erected his castle of Thrieve on the Dee, was another of their strongholds.

The Society had an opportunity of visiting in one of its late excursions, the site of the castle of *Loch Fergus*. There is the Palace and the Stable isle,—both of which were formerly surrounded with water. But the loch is now no longer in existence, and we approach the islands through cultivated fields.

The statutes of Lady Dervorgille for the regulation of Baliol College, are dated from *Botel* or *Buittle*, and are dated the octave of the Assumption, 1282.

An interesting account of the castle of Thrieve is to be found in Nicolson's Galloway, Appendix, Note M, prepared for the work by Mr Train,—who may also have furnished to Sir Walter Scott the *jougs* which hang at Abbotsford, and were formerly at Thrieve. Eight stone balls, 4 of them $3\frac{3}{4}$ lbs. each, found in the castle of Thrieve in the summer of 1843, were in Mr Train's possession; and a stone ball about 19 inches in diameter found there the previous summer was presented to the Maxwelltown Observatory.

The castle of the Bruce at Lochmaben was the stronghold of the Lords of Annandale ; and, on the borders, Caerlaverock Castle was the stronghold of the Lords Maxwell.

The walls of all these castles were of enormous thickness, and by their natural situation they were defended by rivers, lochs, and morasses, and generally also by artificial trenches and ditches. The state of the district in old times favoured such castellated mansions,—so many mountain rivers, so many lochs, so many bogs and quaggs,—all coinciding with the notions and habits which then prevailed.

Caerlaverock Castle was a type and specimen of the castellated mansion in its form, in its front, in its gateways, in its machicollated towers at the angles, and in its fosses and ditches ; with the Solway on one side, and the swamps of the Lochar on the other.

These great castles which I have named were, no doubt, the great strongholds of the district. But great also, though subordinate, were the Castles of

MORTON,

originally the seat of the great Anglo Norman family De Morville, a name which has been unknown and lost in Scotland for 500 years and more,

LOCHWOOD'S lofty towers,
TORTHORWALD,
SANQUHAR,
DURRISDEER,
DALSWINTON,
TIBBERS.

With the smaller castles of

CLOSEBURN,
AMISFIELD,
COMLONGAN,
And the ORCHARDTON TOWER.

The common feature of them all was the *tower*,—which standing alone, and by itself, was a stronghold.

The tower was sometimes of a round form, sometimes it was square: when on a large scale it was commonly the latter.

The lower apartments were for stores or cattle, or for prisoners or a guard. The family lived in the higher portion of the structure, which was reached by means of a narrow winding interior stair. The rooms were small, and the windows—which were often only for the higher apartments—were narrow apertures in the walls. The whole was surmounted by a flat roof, with battlements and machicollations.

When there were two or more towers they were connected together with curtains or connecting walls, and the whole was surrounded by fosses and ditches or natural defences.

As in the case of the great castellated mansions, so also

THE CRANOGES,

or lake dwellings, had recourse to the same natural defences of situation.

Cranoges are of great antiquity, and found in almost all parts of Europe. They appear to have been employed for the purposes of retreat and safety, rather than as ordinary abodes.

They are to be found in all the three counties of the Society's district. In one of our summer excursions we visited the cranoge in the Black Loch of Sanquhar, and in the President's Address of 8th December, 1865, we have been favoured with an interesting account of the examination,—as in the same address we have an account of the lochs and cranoges at Colvend. In May, 1867, the Society visited Loch Kindar, "on one of the islands of which stand the remains of one of the few pre-Reformation churches, while the other may have been an ancient lake dwelling."* Two islands

* "Dumfries Courier," 21st May, 1867.

in Carlinwark Loch are described as having been formed by strong piles of wood, driven into the moss or marl, on which were placed large frames of black oak covered with soil.*

And in the Proceedings of the Society of Antiquaries, vol. 6, p. 114, we have a detailed account of the examination of Cranoges in the loch of Dowalton, and also the White Lake of Mertoun in Wigtownshire.

On Dunhill, which is a rising ground towards the S.E. of Dowalton loch, there was a circular Rath, or large circular enclosure, surrounded by a deep ditch. The Rath, in extent, was about 36 yards in diameter. Similar elevations occur on the N. and S.W. sides of the loch, where Rathes may have been placed ; but if so they have been effaced by cultivation.

No implement of stone has yet been found here ; but bronze utensils, one like the vessels found in a moss near Friars' Carse in 1790, iron hammers, and a ring of bronze, with other relics.

The next objects of interest in the district are

THE MOATS, OR MOTE HILLS.

These are mounds of earth, generally, in the main, of a natural formation, and supposed to have been used as courts of justice.

They are of frequent occurrence ; but their history and uses are little known.

The name is understood to be derived from a word signifying a meeting,—and the great Council of England in Saxon times was the *Wittena gemot*, or meeting of Wise Men.

The statutes of King Malcolm 2 commence in this way :
 “ King Malcolm gave and distributed amongst his men, all his lands of the realm of Scotland, and reserved nathing in property to himself but the royal dignity and the *Mute hill* in the town of Scone.”

* See Proceedings of the Society of Antiquaries, vol. 6, p. 126.

The Moat of Urr is reckoned the largest in Scotland.

Our Society had an opportunity of examining two good examples—the Moat of Balmaclellan and the Moat of Dalry.

The Moat of Balmaclellan is 18 feet 4 inches in height, and the circumference at its base measures 2614 feet.

Both it and the Moat of Dalry appear to have been surrounded, at least partially, with a ditch.

At the Moat of Urr and in its neighbourhood have been found at different times, spears, vessels or utensils, and coins.*

THE TUMULI AND SEPULCHRAL CISTS

of early times have proved the great storehouses of ancient relics ; and, like geological strata, supply us with interesting and valuable materials for the history of early and pre-historic times. As it was the practice to bury the dead in costume, their graves furnish us with articles illustrative of the dress and ornaments of the early inhabitants, and even of their weapons and utensils.

The terms *Barrow*, *Tumulus*, and *Cairn* are said to be all of similar import, synonymes of one another and of our word *mound*, all indicating interment, it being customary to pile up over the graves of the dead heaps of stones—the size of the heap indicating the honour or esteem in which the deceased was held.

In one of the Society's excursions Cairnholy was visited, the supposed burial place of the valiant King Galdus,—the first of the Scottish kings, according to Buchanan, who ventured to cope with the Roman power ; and it is also said that the route to and from Whithorn, where the pilgrims rested on their way to the shrine of St. Ninian, was marked by cairns from the Nith, the Doon, and the Irish Sea. But in both these cases the traditionary accounts require to be collected and compared with each other and with the facts and circumstances.

* See Statistical Account of Urr.

MONUMENTAL EFFIGIES.

These abound in England, and there they form a rich treasure, illustrative of the history of art and of social life, as well as commemorative of relationship, worth, or station. Here it is otherwise, there being few of any kind, and of an early date perhaps none, that are unmutilated.

How is this ?

On the one hand undoubtedly, the necessities of life (as we may call it) have had a large influence ; for *houses* have been aided out of the old abbeys, and country *dykes* from cairn heaps. But other causes have also been in operation. The figure of Alan Lord of Galloway at Dundrennan, the great lord whom Buchanan calls *Scotorum longe potentissimus*, is an object. And at Lincluden Abbey one looks with indignation at the rifled and demolished tomb of the Countess of Douglas,

Regis Scotiæ Filia,

so finely represented in Pennant's work. It might also be thought, not unreasonably, that the Abbot Stone and Nun Slab at Dundrennan Abbey were originally *brasses*, but *brasses* no longer.

Considerations such as these invite enquiry—less to redeem the past than to prevent the recurrence for the future if possible.

CROSSES AND OBELISKS.

These form the last of the *fixed structures* of the district to which we here invite attention.

The Society had an opportunity in one of its excursions of visiting and examining the Ruthwell Cross.

This Cross has been termed by Professor Sir J. Y. Simpson "the finest Teutonic Cross in Scotland."*

* See Proceedings of the Society of Antiquaries, vol. 4, p. 44.

The inscription or sculpturing on this Cross is supposed to be *Runic* or in *Runes*—terms employed to designate alphabetic characters in use in early times by some nations of Northern Europe. The Runes are of three classes—Scandinavian, German, and Anglo Saxon.

The inscription on the Ruthwell Cross was considered Anglo Saxon, and supposed to be part of a poem entitled “Dream of the Holy Rood.” But other views were also taken, and Mr Carr, a late investigator, considers the inscription merely illuminated or decorated *Saxon*.

A portion of another Cross was discovered in taking down the walls of the old church of Hoddam. This was presented to the Society of Antiquaries by Mr James Gibson Craig.

And another portion, apparently one of the arms of the same cross, was acquired by that Society.

This Cross has sculptured on it various figures of a Christian character; and a sculptured Stone with an inscription in Runic supposed to be of an age co-eval with the Cross.*

So also in the old church-yard of Dunrod the Society found, in one of its excursions, an ancient Font, and portions of an ancient Stone Cross.

In the Proceedings of the Society of Antiquaries, vol. 4, page 112, there is a paper on the Market Crosses of Scotland.

This excellent paper is interesting to us in so far as it takes notice of Crosses in this district. These are Lochmaben and Thornhill—which are contrasted with one another,—the Cross of Lochmaben having, like many others, been raised on steps, whereas the Cross of Thornhill, like others there mentioned, consisted of a solid basement with the Cross or pillar springing from the centre.

No mention is made of the Market Cross of Dumfries, which is to be regretted. Perhaps some member of this Society will favour us with a paper on the subject, describing the old Cross of the town, with its local and historical associations.

* See Proceedings of the Society of Antiquaries, vol. 1, p. 11.

With the Crosses and Obelisks may be ranked *the simple Monoliths*, or single upright stones occasionally met with.

But where there is no inscription or sculpture on them, as in the case of the great monolith on Dalarran Holm, which the Society had lately, in one of its excursions, an opportunity of inspecting, little remains for its elucidation save its position and situation, and any existing traditions respecting it.

These are the observations I had to make on the *Fixed Structures* of the district.

PORTABLE ARTICLES

are the next in order. These comprise

Articles of Furniture and of Dress.

Domestic Utensils.

Implements of Trade.

Military Weapons and Instruments.

When the tomb of King Robert Bruce was opened at Dunfermline in 1818 and 1819 the body was found lying enclosed in two layers of lead, which had been wrapped round the body in the nature of a sear cloth, with fragments of an embroidered linen cloth in a greatly damaged condition. This cloth had apparently been thrown loosely over the lead, as a shroud. It was of fine linen interwoven with threads of gold.*

A portion, or rather *bit* or *morsel*, of this royal tissue was presented to the Society of Antiquaries by Sir Henry Jardine, then King's Remembrancer.

The preservation or existence of this cloth after so long a period of years was not to be expected, and, generally, in our antiquarian researches we cannot look for articles so perishable, which decay and come to dust.

We must ordinarily content ourselves with finding articles

* See Trans. Soc. Antiq., 4to vol. 2, p. 435.

in bone and flint, in stone, brass and iron, in the precious metals, in minerals, in glass, in the harder and more durable woods, and generally things of a lasting and enduring nature.

When the foundation of the New Church in Dumfries was being formed, a bronze figure of the Saviour was found in the rubbish. It had doubtless been affixed to a crucifix, as appeared from the back, and provision for fastening the feet; and the arms were broken off. A cast was made for this Society. The bronze head of a crosier was found near Hoddam Church, and is now in the Museum of the Society of Antiquaries. The parish of Holywood has an old communion cup, with the date 1619. It is in the possession of the Minister.

In the Museum of the Society of Antiquaries we find the steel matrix of the Common Seal of the Burgh of Dumfries; and there also is the key of the old Parish Church of Lochmaben, taken down in 1818. And the keys of the old Jail of Dumfries, which had come into the possession of the late Mr Wright, were, on his death, given over, through a member of this Society, to the Maxwelltown Observatory.

In 1826 a Bronze Armlet was found in a turbary or peat moss in the parish of Borgue. See proceedings of the Society of Antiquaries, vol. 3, p. 236. And in 1849 three Silver Brooches were found near the old Church of Middlebie—one of them with this inscription—

IHESVS. NASARENVS :
REX. IVDE.

See vol. 1, p. 25. Another Silver Brooch with a like inscription, with fragments of other Silver Brooches, were found in the parish of Canonbie. See vol. 5, p. 216. And one of the members of our Society (Mr Gibson) is in possession of another Silver Brooch with a like inscription, found at Drumcoltran. The inscription on these brooches was a frequent formula on early amulets.

In trenching a moss in the parish of Balmaclellan, a hand

Mirror of bronze was found, the measurement of which, with the handle, was 13 inches. See Proceedings of the Society of Antiquaries, vol. 4, p. 293. A massive Ring of gold, $1\frac{1}{2}$ inch in diameter, was found when making a furnace pit for heating the Parish Church of Kirkpatrick-Durham. See Proceedings, vol. 5, p. 214. And, along with the brooch above mentioned in Mr Gibson's possession, there was also found a Ring at the same time.

Two Oak Bedposts from Amisfield, and a Carved Oak Door, bearing the date 1600, came into the possession of the Society of Antiquaries. See Proceedings, vol. 4, p. 380. Both these articles are referred to in *Grose's Antiquities*; and in the Society's Report it is added that the ceiling of the King's Room was curiously ornamented in plaster. Our Society had an opportunity of inspecting this room in one of our excursions.

In exploring the cranoge in Dowalton Loch, various articles were found and sent to the Antiquarian Museum in Edinburgh, namely—Bronze Vessels and Implements, Bronze Rings, Iron Axe Heads and Hammer, Beads of glass, paste, and amber. See Proceedings, vol. 6, p. 109.

In an old paper in the Transactions of the Society of Antiquaries, 4to vol. 2, p. 199, by the Rev. John Dow of Methvan, an early attempt was made to distinguish and arrange the brass and stone celts or axe heads, which are from time to time discovered,—a subject which has been largely and tastefully handled in Mr Gibson's paper of 6th January, 1863, "On the antiquities in the stone, bronze, and iron periods of Dumfriesshire and Galloway." This paper on this class of articles in the district is of great interest.

Under the head we are now considering, we may here refer to three

FLAGS

of an interesting character.

One of these was the ensign of K. David I. at the battle

of the Standard, 1138, which was presented to the Society of Antiquaries by Mr George Chalmers. See Transactions of the Society of Antiquaries, 4to vol. 2, p. appendix p. 2.

The other flags are Covenanting Flags. One of these was exhibited to our Society in one of the ordinary meetings. It is a Covenanter's Flag from the parish of Irongray, and was purchased by the Society of Antiquaries. And in the *Dumfries Standard* of 6th Nov., 1867, reference is made to another Covenanters' Flag in the possession of Mr James Smith, parish of Shawhead, Irongray.

With respect to the National Standard of Scotland, there is reason to think that it is of Galloway original, and that it was assumed by the King of Scots, from the armorial bearings of Fergus, lord of Galloway.

At the battle of the Standard the *vexillum regale* had a *dragon* pourtrayed on it, but in the time of William the Lyon, after the defeat of Fergus, lord of Galloway, the *lion rampant* was displayed.

COMMON SEALS.

The Abbeys and Monasteries had usually, like the Towns and Burghs, a *sigillum* or common seal for the corporate body.

It would be well if members would bear this in mind, and furnish the Society with *impressions* of such seals as come into their hands.

COINS AND MEDALS

form another of the class of objects we are now upon, and of these also Mr Gibson has a large collection. He might be induced to give to the Society a paper on the *Numismatic History* of the district, with illustrations.

Such a paper is much wanted, and would be both interesting and instructive.

BOATS AND CANOES

form the last of the branch of articles we are now upon. They are found in different places, but commonly in connection with the cranoges or lake dwellings.

The Society had an opportunity of seeing at Sanquhar the Canoe found at the Black Loch. It is cut out of a single tree of oak, and measures 15 feet in length and 3 in width. Canoes have also been found in the Lochar Moss, in Carlinwark Loch, and other places. The Canoe found in connection with the cranoge in the lake of Dowalton, in Wigtownshire, measured 21 feet in length, and was cut out of a single tree of oak.

In 1859 a Canoe of oak was found in the Castle Loch of Closeburn, measuring 12 feet in length and 2 feet broad. It was presented to the Society of Antiquaries by Mrs Baird of Closeburn, 11th June, 1866.

We have now reached the third and last branch of our subject, namely—

PHILOLOGICAL AND PSYCHICAL MATTERS.

Under this head would be included—

The vernacular language and dialects of the district ;
 Names of places ;
 Local customs ;
 Legendary tales ;
 Letters, books, and manuscripts.

This is a large field and promises to be interesting. But as yet we have had few papers on the subject.

Mr Shaw has given to the Society a list of some words supposed to be peculiar to the district. This is an acceptable instalment on the vernacular language of the district ; and it would be interesting and valuable to proceed, with a view to ascertain the reason and source of the difference, and connect these with the early inhabitants.

A very interesting question has arisen as to the first inhabitants. They have been reckoned Celts, but an examination of the names of hills and rivers and other permanent objects of nature may afford good means for determining who the first inhabitants were, and, from their language, the nation to which they belonged.

The examination of such names is therefore of great interest and importance, and a prosecution of Mr Shaw's pursuits may lead to valuable results.

With regard to the language of Scotland, it is an interesting question, and one which we very much wish to see investigated, namely—*how*, or *at what time*, its present form and character were determined.

When we peruse Chaucer and other early writers of both countries, we see plainly a language common to both.

But immediately we perceive also that the English has started off in a career of improvement in which the Scotch does not participate, but, on the contrary, that the Scotch remains stationary, in so much that it is composed in great part of the old English.

The question therefore is—What made the difference? And it would, accordingly, be interesting to hear a paper on the subject from some member of our Society.

The subject is especially interesting, because it would seem to have been at this time also the Scotch *proverbs* and the Scottish *music* had their origin.

The Rev. Mr Hogg has given a paper on clerical customs in the olden times.

This is very amusing and interesting; and were the paper limited to the Society's district, it would be highly characteristic.

We have also been favoured with extracts from the records of the Town Council on matters of interest and importance.

This is a valuable source of supply. And perhaps, also, the Trades' Records might be examined with advantage. The Kirk Session and Presbytery Records would also afford information of great interest, as well as extracts from legal

documents and the Protocol Books. In short, public and authentic records of all kinds should be searched by those who have access to any such.

The journals and day books of medical men have also afforded valuable information—showing the course of practice in old times as respects medical fees and charges, and also the *practice* of the profession.

In the statistical account of the parish of Crossmichael there is a statement by Mr Train to the effect that, even in the memory of persons yet alive, perforated stones were used in Galloway to avert the effects of witchcraft, particularly in horses and black cattle. These stones were, he says, round flat stones, of about 5 or 6 inches in diameter; and he adds that he had one in his own possession as black and glossy as polished ebony. It was found in the ruins of an old byre, where it had evidently been placed for the protection of the cattle.

There is one subject on which it is desirable to have some information, and that is the *Market Towns* connected with Dumfries, as the principal market town of its district.

It would appear that in early times the market days of a district were adjusted with reference not only to each other, but also to the market day assigned to the principal market town of the district. And certainly something of that kind may be traced.

For as *Wednesday* was the market day of Dumfries, as of Edinburgh, Glasgow, and other principal towns, so *Monday* was the market day of Castle-Douglas, *Tuesday* that of Peebles, *Thursday* the market day of Lockerbie, *Friday* that of Kirkeudbright, and *Saturday* the market day of Gatehouse and Wigton.

But a minute examination of the subject, in a paper devoted to the purpose, would be desirable:

There is a peculiarity in the form and pronunciation of our common names to which I wish here also to advert, in the hope that some member of our Society will be induced to prosecute the enquiry.

The peculiarity to which I advert is what may be called the *Trochaic* characters of our common names. They are commonly of two syllables, with the accent on the first.

Bobby,
Davy,
Jockey,
Jamie,
Tammy,
Watty,
Willy,

with

Babby,
Chirsty,
Jeany,
Nanny.

The corruptions take the same form.

Neddy,
Paddy,
Sandy,

with

Betty,
Maggy,
Peggy.

But where the name is already of this form, it remains without alteration.

Helen,
Mary,
Susan.

The English, on the other hand, seem rather to prefer single syllables.

Queen Bess,
Bluff King Hal,
Peg Nicolson,
Nell Gwynne,
Nan Rawlins of Hogarth.

The only remaining topic on this, the last branch of our subject, is the matter of song.

For the heart to break forth into song, says Chambers (in his introductory sketch to the "Songs before Burns"), whether to express love, merriment, or national and political sentiment, is so natural that we may safely contemplate song as one of the earliest forms of literary composition in all countries. As far as Scotland is concerned, he says, we find that the death of Alexander 3 (1286, A.D.) was bewailed in a popular song; that the Scots had satirical songs on Edward I. and admiring ditties regarding Sir William Wallace, and that the triumph over the English at Bannockburn was hailed in an outburst of rude, but joyful verse. We find, he adds, various allusions to popular songs in the histories of the 14th and 15th centuries, and in such poems of those ages as have survived,—a whole catalogue of such ditties being given in the comic piece called *Cockelby's Sow*, which appears to have been composed in the middle of the 15th century.

The vernacular literature of Scotland in early times was comprised in the poems of Sir David Lindsay, the histories of Sir William Wallace and the Bruce, and the ballad of Graysteel. These at least formed a prominent part of the old vanacular literature of the Scottish people. The *tune* of Graysteel, says Mr Chambers (in his *Book of Days*, vol. 1, p. 533), is for certain as old as 1627, and presumed to be traditional from at least 1497, which was in the reign of K. James 4.

In regard to Scottish Song, several of our songs are connected with the district, by their having their *author* or their *subject* belonging to the district. In at least two of our admired songs the *heroines* are from Dumfries. There is Fair Helen of Kirkconnel. She is the *heroine* of a song at once tender, pathetic, and beautiful. And the daughter of a minister of Lochmaben is celebrated in the fine song, "*I gaed a waefu' gate yestreen.*" See Stenhouse's *Illustrations of Scottish Poetry and Music*, p. 142, and p. 323.

Besides the immortal Burns, the district has had various

song writers of repute. Mayne, the author of the "Siller Gun," was the writer of Logan Water :

"By Logan's streams that rin sae deep."

See Stenhouse, p. 42. And

"Jenny's heart was frank and free."

Miss Jeany Graham, daughter of William Graham of Shaw, in the parish of Corrie, was the author of the Wayward Wife :

*"Alas ! my son ye little know,
The sorrows that from wedlock flow."*

See Stenhouse, p. 101 and 141.

"There's nae luck about the house,"

is ascribed to Willm. John Meikle, translator of the Lusiad, a native of Langholm. See Stenhouse, p. 45 and 117.

Then, as respects Galloway, we have the unfortunate John Lowe, son of a gardener to the Gordons of Kenmure. He is the author of *Mary's Dream* :

"The lovely moon had climbed the hill."

See Stenhouse, p. 37.

Bess the Gawkie

was the production of the Rev. Dr Muirhead of Logan, Minister of Urr in Galloway. Burns describes this song as beautiful, *and in the genuine Scots taste*. See Stenhouse, p. 3 and p. 116. And a recent No. of Fraser's Magazine says, *it is true to life as one of Tenier's paintings*.

The words of the song

“ O whistle and I'll come to ye my lad,”

are by Burns, but the *tune* was by John Bruce, a fiddle player of Dumfries. See Stenhouse, p. 109.

From this survey of the district, rapid and general as it is, it will be manifest that the area of the Society's operations is rich in objects and associations of antiquarian interest. And having regard to the large number forming the Society, and at the same time the few comparatively who put their shoulders to the wheel, what we desire is not to weary you with details on the different objects of interest, but rather, in a few remarks, to light up the feelings of members and stimulate them to improve the condition of the Society and further its objects.

It is true that in many cases, as for instance, at the Abbey of Holywood, we may, as it were, see a sepulchral tablet. Here lies an extinct fabric! And there is too frequent reason to deplore the condition of our ancient structures. But yet we have also tangible remains—and ruins which are sometimes magnificent, sometimes picturesque—and these have to the antiquary their responsive echoes. With them the antiquary may hold communion with the past.

And our whole subject is calculated to occupy leisure time usefully and agreeably,—to gratify an ardent and reasonable curiosity respecting the past—to supply trustworthy aids to history, and generally to advance our knowledge, to improve our taste, and to further the progress of civilization.

I have now only to add a word on the means at the disposal of the Society, to carry out its purposes—particularly its Library and Museum. And I do this on the present occasion the more readily, as I was instrumental in organizing the Ceylon Branch of the Royal Asiatic Society, and was elected its first President.

In the *Ayr Advertiser* of 15th December, 1864, some observations were made which are still of use :—There is a desideratum in this Society, and that is a scientific Library. A library has been begun, but as yet it is little advanced, and no one could do better with any spare volumes they may possess, than make a donation of them to the Society. This is urged, because it is only by donations the Library is to be formed. Let Scientific works, works on Natural History, rare Historical works, and works on Antiquities, be addressed, &c., &c.

Greater diversity has unfortunately prevailed as to a *Museum*, and this diversity of opinion has operated most injuriously. It has retarded the collection,—and in this, and other such cases, delay is damage. For by delay articles which would have found their proper place with us, have passed away irrecoverably into other collections,—sometimes into collections which have no ground of preference to our own.

In the course of this address I have had occasion to notice instances of this with regret,—and in the case of members of our Society with more than regret. For *where*, it may be asked, would a person look but to this Society for information respecting the district, and for specimens illustrative of its natural history and antiquities. And, indeed, a collection of such specimens would be of use to the members themselves, by enabling them to distinguish the characteristic peculiarities of the district, and assisting them in forming collections of their own, and promoting the objects of the Society.

It has been deemed a good reason against a local Museum, that local Societies die, are broken up, and their collections are dispersed.

Alas ! the same thing may be said of ourselves. Death and dissolution are the common lot of sublunary things,—and in the outset of this address I have referred to some who have already paid the debt of nature. Yet each in his day may be of use in helping forward the cause of progress and

improvement. And when at length the day of dissolution comes, and a Museum is dispersed, the scattered articles may become the elements of new collections—the seeds of new organizations,

“And bodies that corrupted fell,
Shall incorrupted rise ;
And mortal forms shall spring to life
Immortal in the skies.”

TRANSACTIONS.

NOTICE OF THE DISCOVERY OF AN ANCIENT GRAVE, &c., ON THE FARM OF BROOMHILL, LOCHMABEN. By Mr CORRIE, P.-F.

IN laying before the Society a short account of this grave, with its contents, so far as I was able to recover them, I regret to have to state that in this, as in almost every similar case, the discovery was made by men who had no knowledge of its antiquarian interest, or of the necessity of great care in examining and removing the contents of the Grave. The consequence was that an urn which it contained was broken in pieces; but these pieces, with the bones found at same time, I recovered through the assistance of the Chief Constable of the County, and they are now before the meeting for inspection, and are at the service of the Society if thought fit for a place in their Museum.

As graves, such as that now under notice, are very common, and have been often described, I shall confine myself to a plain statement of the discovery, of the locality where found, and of the appearance and dimensions of the grave itself.

The Grave was found on 26th August, 1867, in a field on the farm of Broomhill, in the parish of Lochmaben, in this county, lying to the south-east of the farm steading, and between it and the river Annan, which runs southwards at a short distance to the eastward. The farm steading itself stands about a quarter of a mile north of the Broomhill or Halleaths Loch. Mr Robert Graham, tenant of the farm, had set his servants to dig sand in the field, and in proceed-

ing with their work, their tools, at a depth of 19 inches from the surface, struck upon the cover of the grave in the shape of flags or flat stones. On removing these the grave was laid open, and was found to be 3 ft. 6 in. long, by 1 ft. 10 in. wide, and about 18 in. deep; and was enclosed on the sides and ends, and bottomed, as it had been covered, with a kind of gray coloured slaty stone. It contained what has evidently been one of the ancient hand-made Cinerary urns, and a quantity of human bones and six teeth. The urn, as I have already said, was broken by the workmen, and part of the bones crumbled into dust when touched. The teeth, it will be seen, are in wonderful preservation.

On learning of the finding of the grave, I caused immediate inquiry to be made, and myself saw Mr Graham as to whether or not any celt or other instrument had been found, but none such had been noticed.

NOTICE OF ST. QUERDON'S WELL. By JAS. STARKE,
F.S.A. Scot.

THIS Well is on the farm of Barbush of Cargen, near to the footpath which leads through the fields from Cargen Bridge at Islesteps, and about half a mile from the Islesteps bridge. It was a saint's well, one of the holy wells of old times, and was of great repute for the cure of disease, particularly the diseases of children; and some years ago, when the well was dredged by the tenant of the farm, coins were found in it, which were no doubt the offerings of invalids.

At present the Well is an open spring or fount of clear water, and is thus greatly exposed. But it is said to have been at one time enclosed within a bower, which had the convenience of a seat in it, for invalids and visitors.

The Well is known by various names.

In a poem on the Well by Mr White, late teacher of

mathematics in the Academy of Dumfries, it is called St. Guerdun's Well, and the saint is a female, the daughter of Barold. But the author of the poem professes no antiquarian knowledge on the subject, and the poem gives us no legendary or traditional information respecting the Well. The poem was written in the year 1789, and was printed anonymously by Mr Robert Jackson of Dumfries in 1795.

In the Statistical Account of the parish of Troqueer, in which parish the Well is situated, reference is made to Mr White's poem; yet here the Well is called not St. *Guerdun's*, but St. *Querdon's* Well. And in the Ordnance Map the name given is St. *Jardan's* Well. The Well is further known by the name of St. *Jergon's* Well.

These various names are probably versions or corruptions of the true name, and none of them occur in any of the Lists of Saints that I have seen. But in Keith's Calendar of Scottish Saints there is the name of St. *Queran*, and he may be the true saint—the names of Querdon, Guerdun, Jardan, and others being corruptions.

The first St. *Queran* is an Irish saint, St. *Kieran* or *Queran*, whom the Irish style the first born of their saints. He was somewhat older than St. Patrick, but is thought to be one of the twelve whom St. Patrick consecrated Bishops in Ireland to assist him in his labours. In his old age he passed over to Cornwall, where he ended his days in preparation for eternity, and the spot on which he died is called from him *St. Peran in the Sands*.

The next saint of the name is St. *Kieran* or St. *Queran* the younger. He also was of the island of Saints, and was an abbot in Ireland. He founded numerous monasteries, and his monastic rule, or *the Law of Kieran*, was very austere. This saint died in the year 549.

Butler adds a note to his account of this saint, in which he says:—"The Scots honor on this day (9th Sept.) another St. Kieran or St. Queran, Abbot of the Monastery of Feale, in the county of Ayr, in which province stood the celebrated Abbey of Paisley." Butler continues thus:—"Some Scotch

writers place this St. Queran in the 9th age, but it is probable that they have confounded him with our Irish Saint, who was in that age honoured at Paisley with particular devotion. The festival of the Scotch St. Queran is 9th September, and the date assigned to him is A.D. 876. This date carries us back three centuries anterior to the founding of Dundrennan Abbey, which is considered one of the earliest of the Romish monasteries in this quarter. But at that time the Abbey of Holywood, in some of its earlier forms, would be in existence. The early ecclesiastical history of this district is, however, little known.

I here submit to the Society a phial of the water taken from St. Querdon or St. Queran's Well.

FEASTING AT FUNERALS. By Mr M'DIARMID.

AMONG some papers which recently came into my hands was an account, dated 1733-4, for some expenses incurred at the funeral of Sir Robert Grierson of Lag, Baronet. My impression was that this referred to the funeral of the celebrated or notorious Sir Robert Grierson, the persecutor of the Covenanters, regarding which there is a mass of local tradition. It is said that the horses yoked to the hearse in which the remains of the deceased were placed refused for long to draw, that at last they started off at the gallop which was unchecked until the Church-yard of Dalgarnock was reached, whereupon the animals fell down dead. On referring to Mr J. C. Gracie, our local genealogist, I have been assured that *the* Sir Robert died in his town house at Dumfries, a house next and north of the present Commercial Hotel, on the 20th of April, 1723. Mr Gracie says he has this from the family records, but that he has seen many dates given as the demise of Sir Robert, all widely wrong.

It is true that Sir Robert left four sons, one of whom bore his Christian name, but it is rather remarkable that a Sir Robert Grierson of Lag should have died in 1723 and a second in 1733.

The account referred to amounts to £23, 4s. 5d., of which £14, 5s. 5d. was for wine, £6, 10s. for an entertainment, 6s. 6d. for bread, 5s. 6d. for iron work on the hearse, indicating that it had been damaged, and the balance for feeding horses, among which are mentioned those of Lord Stormond and Sir Thomas Kirkpatrick.

The items of the entertainment are given in a separate memorandum, and they show a wonderful resemblance betwixt the entertainments of the present day and those given 135 years ago. They consist of a bacon ham, a piece of roast beef, a roast pig, goose, turkey, a calf's head stewed in wine and oysters, neats' tongues, capons and fowls, a pasty, 2 dozen of tarts, 2 dozen of mince pies, roast mutton, roast veal, a barrel of oysters, oil, pepper and mustard, and vinegar. The account seems to be in English money. The pig cost 2s. 6d. ; the goose, 3s. ; the turkey, 4s. ; the quarter of mutton, 3s. 6d. ; the barrel of oysters, with 6 lemons and other pickles, 4s. The conjunction of lemons with oysters is notable ; here now-a-days when oysters are served, which is rare owing to their scarcity and high price, it is with vinegar ; in the south of Italy, as in Nithsdale in 1733, lemon or citron takes the place of vinegar with oysters and indeed all other fish.

The wines supplied consist chiefly of claret, small and strong : the small is charged 1s. 6d. per bottle, the strong 2s., and the consumption of the latter was much the greater of the two ; sherry also figures in the list, costing rather less than 2s. per bottle, and a wine or liquor called grantmak at that figure. The price of brandy was 1s. 6d. per bottle. The supply of wines began on the 29th of Dec., and was continued for upwards of a fortnight, ending on the 14th January. The 8th of January seems to have been the funeral day ; four dozen of strong claret were sent to the lodg-

ing in the morning of that day, half a dozen of grantmak, and half a dozen of sherry ; then a dozen of strong claret was sent out to the burying-place ; and the last item for the day is 12 bottles more strong claret at night to the lodging. The entries on the 9th are suggestive, viz., 4 dozen empty bottles returned and 26 wine glasses ; on the 11th consumption was renewed, and we have 8 bottles of claret, strong, 16s.

A similar account for the funeral of Mr John Grierson, of date 1730, throws some light upon the preceding one and the customs of the time. It extends from the 23d of February to the 3d of March. The first item is two bottles of claret and a bottle of brandy to those as sat up all night with the corpse. On the 24th February there is a bottle of claret when the soar cloth was put on and another when the grave cloaths was put on. On the same day at the incoffining where the ladies was 1 bottle claret, 2 bottles white wine, and 1 bottle canary ; to the room where the gentlemen were before the corps was transported, 2 bottles white wine, 1 bottle canary at 1s. 8d., and 6 bottles of claret at 1s. 6d. each. On the same day when the company returned 10 bottles of claret, 1 of white wine, and 2 bottles of brandy for the gentlemen's servants. On the 5th of March there were 22 bottles of claret supplied to the two rooms when at meat, and 4 bottles of brandy for the tenants' and gentlemen's servants ; and at night when the gentlemen returned 25 bottles claret, while 2 bottles of brandy went to Rockhall. During all the time, besides wine and brandy, there was a steady consumption of ale going on, which is slumped at the last date, March 6th, ale, from the 23d of February till this day, £1, 19s. 6d. The funeral feast for Mr John was not so extensive as that prepared for Sir Robert's obsequies, and it only cost £1, 10s. 3d. The first item in the account for what was laid out for meat at the funeral was 2s. for a salmond weighing 8 lbs., and thus costing 3d. per lb., and killed in what would now be close time ; 3 perch follow at 1s. 11d. ; then veal and beef ; three partridges at 4d. each ; and 3s. for butter, for sauce and roasting.

Along with these accounts there is a note or order which shews the manner in which they were incurred. The order is addressed for Bryce Blair and signed Ka. Douglas.

“ We like your wine so well that the Laird has ordered me to desire you to send with the bearer half a dozen bottles. Dispatch our man quickly. Being in haste, I am your very real friend.”

NOTES ON THE SCOTTISH LANGUAGE. By JAS. STARKE,
F.S.A. Scot.

An enquiry into the formation or development of the Scottish language is beset with difficulties ; and any attempt at its elucidation may be acceptable.

In this view I have been induced to throw together some notes on the subject ; and, assuming that the Scottish language is affiliated with the English, my object in the present paper will be, in the first place, to point out some tendencies of pronunciation in the one which appear to be largely developed in the other.

What I more particularly refer to is the suppression of some letters in utterance or pronunciation. And the first to be here noticed is the suppression of the letter *l*.

Mr Walker, the lexicographer and orthoepist, in his remarks on the different letters of the Alphabet, gives, under the letter *l*, a short list of the words in which that letter is mute, and then says the same letter is mute also between *a* and *k* in the same syllable, and between *a* and *m* in the same syllable ; but in this latter case he has qualifications and directions. He then goes on to say that the letter *l* is always suppressed in the auxiliary verbs *could*, *would*, and *should*. But that to suppress it in the word *fault* is, he says, vulgar ; and to call a *soldier* a *soger*, is far from being the most correct pronunciation.

Thus far Walker. But the Scotch, in their pronunciation, not only adopt these elisions without hesitation, but many more. For besides saying *faut* for *fault*, the Scots say *maut* for *malt* and *saut* for *salt*.

We may also recognise in the Scottish *aumry* the word *almirah*, meaning a press, cupboard, or wardrobe; and for a mask or vizard the Scotch use the phrase *a false face*, or, as they pronounce it, *a fause face*.

The *halse*, meaning the neck, is *the hause*.

“ For ruddy ruddy grew her *hause*,
As she supped the bluid red wine.”

And the *houses* or holes through which a ship's cable passes bears indications of the same old manner of pronouncing the word.

To *hold* or *hald* is with the Scotch to *haud*.

“ Haud awa, bide awa,
Haud awa frae me, Donald.”

When *l* suppressed comes after the vowel *o*, the vowel acquires a diphthongal sound—*ow*.

Thus—*gold* is *gowd*; *golden* is *gowden*; the game of *golf* is *gowf*, and the players are *gowfers*.

The participle of the verb to steal, which is *stolen*, is *stoun*, as when the Scots speak of “steekin the door when the steed's *stoun*.”

In the Pillow Dance, the pillow or bolster used is a *bowster*, and the dance goes by the name of “Babbety Bowster.”

The *poll*, or head, is the *pow*.

“ There's little wit in the *pow*
That hauds the candle to the *lowe*.”

To *roll* is to *row*; and a *knoll*, or hillock, is a *know*.

This may explain the *golden knolls*, that is to say *broom hills*, or *gowden knowes*, of the song “The Cowden Knowes.”

The verb to *pluck* is to *pouk*; and a *plucked goose and hen* would be *poukit birds*.

When *l* is the final letter of a word, it is commonly suppressed by the Scotch.

The English suppress it in their phrases *sha'nt* and *won't*, for *shall not* and *will* or *wol not*.

But in the Scotch the suppression of the letter is so general as to form a very marked peculiarity in the language.

The Aberdeen story of the "A ae woo" will occur to every one.

In this connection I may notice the Scottish phrase to *spae fortunes*, the operating female being a *spae wife*.

I will not be positive, but I conjecture that the word is to *spell*, the final letters being suppressed. The phrase is sometimes varied by the phrase to *rad fortunes*. But whether the term to *spell* or *spae* is to be taken in its literal sense of *reading* a fortune, or in the more recondite and technical sense of a *spell*, charm, or incantation, may be left an open question.

The next letter to be noticed here is the letter *v*, which is suppressed by the English sometimes and by the Scotch often.

The English suppress it in their phrase *ha'nt* for *have not*; and the Scotch in their phrase *hae ye no*, for *have you not*.

" I *hae* been east, I *hae* been west,
I *hae* been far ayont the sun."

The English also suppress the *v* in *o'er* for *over* and *e'en* for *even* or *evening*; and the Scots suppress it in *brave* and *bravely*, which they pronounce *braw* and *brawly*.

Dean Trench, in commenting on these words, says—" I do not very clearly trace by what steps it obtained the meaning of *showy*, *gaudy*, *rich*, which once it so frequently had, in addition to that meaning which it still retains."

But if we may judge from the Scotch use of the words, *rich*, *showy*, *gaudy* were the original meaning: it is the exclusive meaning with us.

In like manner a person who is *well* or *ill favoured*, as the English express it, in the sense of *favour* or *countenance*, the Scotch call *weil* or *ill faured*, suppressing the *v*.

“ But kenn'd my minny I were wi' you,
Ill fauredly wad she crook her mou,
 Nor see a puir man wad she, I trow,
 After the gaberlunzie man.”

The word *severe* becomes, by the suppression of the *v*, the Scottish *sair*—

“ And Russel *sair* misca'd her.”

This is the word *severe*, though not grammatically correct. Then we have the word *sair* as a synonyme of *sore*—in a physical sense.

And to these we add the verb *to serve*, which is commonly written *sair*, but erroneously, as here it is only the suppression of *v*.

“ Gie me a spark of Nature's fire,
 That's the learning I desire,
 What *serts* their grammar ?”

The Scotch also say *shool* for *shovel*; and the name of the evil spirit follows a similar analogy (*deil*)—suppressing the *v* in both cases.

So also for the verb *to give*, the Scots say *to gie*; and for *livelong* they say *lee lang*.

“ The *lee lang* night, wi' crabbit leuks,
 They'll deal the devil's picture beuks.”

In the Scotch word *aboen* we may also recognise the *above* of the English, as it appears in Chaucer's time *aboven*. The English dropt the final *n*, and the Scotch, following a prevailing tendency, dropt the *v*. The one made the word *above*, and the other *aboen*.

The suppression of *v* in the words *dove* and *love*, especially when combined with the power of forming *diminutives* so peculiar to Scotland, has given to the sentimental language of the Scotch much of its well known character for pathos and tenderness.

Hence, also, for a *dove cot* they say a *doocot*.

Passing on now to the suppression of *v* after a consonant, *silver* is *siller*, and we have "the *siller gun*" of Dumfries.

And *harvest* is *hairst*.

After the fatal field of Flodden

"In *hairst* at the shearin'
Nae younkens are jeering,
The bandsters are lyart, wrinkled, and grey."

This form of the word *harvest* or *hairst* may perhaps furnish an explanation of a family name respected in the community, for it may be that a son of the house came into the family at *harvest* in the evening; and his descendants may have adopted the name as their designation—*harvest evens* or *hairst eens*—HAIRSTENS.

In a limited number of words both *l* and *v* are suppressed.

Walker says that in the word *twelvemonth* the English sometimes suppress the *v*, and say a *twel month*. But in this word the Scots suppress both *l* and *v*, and say a *towmond*.

"Surrounded wi' bent and wi' heather,
Where muircocks and plovers were rife,
For many a lang *towmond* thegither
There lived an auld man and his wife."

And for the word *overly* they say *orry*, *o'er'y*, or *orra*.

So much, then, for the suppression of the single letters *l* and *v*, and the suppression of them both in the same word.

Let us now proceed to notice some combinations of letters which are suppressed by the Scotch.

Th is suppressed. This is the case with *mouth*, which is the *moo*; *quoth* is *quo*, as *quo he*, *quo she*; *froth* is *fro*; and *broth* is *broe*, only the Scots have the *broe* of *broth*. *Un-*

couth is *unco*, and the preposition *with* is *wi'*. The imprecatory phrase *faith not* is *faint*—as *faint a bit!* and the verb *to smother* is *to smoor*.

Faint—

“ His locket lettered braw brass collar
 Showed him the gentleman and scholar ;
 But though he was o' high degree
 The *feint* a pride, nae pride had he.”

—Burns's *Twa Dogs*.

On the other hand the Scotch retain the guttural *gh*. They do this,

1. When the English suppress it as in *high* for *high*, and the verbs *brought*, *sought*, *thought* ; so also *daughter*.

2. When it is softened by the English ; as in *cough*, *laugh*, *rough*. And

3. When the English make the sound hard, or change it into *k*, as *hough* for *hock*.

It would thus appear that in the Scotch the *gh* retains at all times its guttural sound.

Ch also, which is softened by the English, is retained hard by the Scotch with great uniformity. As for *chaff* they say *cauf* ; *chalk*, *cauk* ; *chest*, *kist* ; *churn*, *kirn* ; *breeches* are *brecks* ; and the *such* and *such like* of the English are with the Scotch *sik* and *sik like*. The *stitch* is a *steek*, as, “ A *steek* in time saves nine.” To *stretch* is to *streek*. To *thatch* is to *theik*. And as for the *ditch* it might be thought that the *ditcher* and the *dyker* had different occupations. But the old proverb,

“ February fills the *dyke*,
 Be it black or be it white ;”

And the old song,

“ My father's a *delver* o' *dykes*,”

would teach us otherwise. By the same analogy, *itchy* is *iky*, or, as the Scots pronounce it, *yeŷky*. The *kirk* has become a *church*. The *carl* has become a *churl* ; but the English

have no carline or female carl. *Breeches* are *breeks*, and to *screech* is to *screek*, except apparently in the phrase "*the screegh o' day*," where most anomalously the *ch* takes a guttural sound.

The phrase "*the screegh o' day*" seems to be peculiar to the Scotch ; yet its meaning must be familiar to all who have been in the country at the break of day, at which time the woods resound with the vociferous melody of the feathered tribes.

So much, then, for the combined letters *th*, *gh*, and *ch*.

But undoubtedly what gives to the Scottish language a very marked peculiarity is the large amount of words in which the Scots retain their old Saxon form. *Ane* for *one*, *ance* for *once*, *bane* for *bone*, *hame* for *home*, *lang* for *long*, *auld* for *old*, *cauld* for *cold*.

Many such words occur in Chaucer and other early writers, who retain them in the old form. But this is now obsolete in England, though still retained in Scotland.

To this class of words may be added words which retain in the Scotch what may be called their old English meaning, now obsolete in England.

Body is still used here in the sense of a *person* :

"Gin a body meet a body."

Brave and *bravely*, or in the Scotch form *braw* and *brawly*, we have already referred to as retaining their old meaning of *rich*, *showy*, *gaudy*.

Chest or *kist* is still in use for a *coffin*, and the meeting for placing the dead body is still to be heard as "*the kisting*." Dean Trench shows us that this was its old meaning in England ; and it is not obsolete with us.

Child, if our Scottish word *child* is the same, is still retained in Scotland in the sense of a *young man* in general.

Gate is still used in its old sense of a *road*, *street*, or *way*. And it may be recognised in some of the old names of streets in London. The main street of most of our towns was the

High Gate, now *High Street*, and what is now *English Street* in Dumfries was formerly *Lochmaben Gate*; as the way to the "auld kirk" of St. Michael's was and still is the *Kirk Gate*.

Burns, in one of his many tender pieces, used the term *gate* in its old sense:—

" I gaed a waefu *gate* yestreen,
 A *gate* I fear I'll dearly rue,
 I gat my dead frae twa sweet een,
 Twa lovely een o' bonny blue."

Where there was a line of houses without any formed street, it was a *row* or *raw*. Such a line opposite the Friars' Vennel was the *Mid Raw*, and what is now *Loreburn Street* was the *East Barns Raw*.

To *grudge* is used in its old sense of *murmuring* or *re-pining*:—

" Our bonny bairnie's there, Jean,
 She was baith guid and fair, Jean,
 And we *grudged* her right sair
 To the land o' the leal."

Silly is constantly used in the old sense of *weak* in mind or body, and thence, by extension, *simple*, *foolishly doating* *foolish*.

" The pawky auld carle came o'er the lea,
 Wi' mony gude days and eens to me;
 And saying gudewife, for your courtesy
 Will ye lodge a *silly* puir man."

Wife is used in the sense of *woman* in general. Thus an *Herb woman* or dealer in herbs and vegetables is, with the Scotch, a *Green wife*; and a fortune teller is a *Spae wife*.

Chaucers' *Wife of Bath* may perhaps be taken as an example of the English use of the word in its old sense. The last term we shall notice is *Womb*, or in its Saxon and Scotch form *Wambe*. This term was formerly used not in

its present restricted sense, but in a general sense as the Scotch now use their term.

Dean Trench quotes a passage from Wycliff's Bible, in illustration:—"And he covetede to fill his *wombe* of the coddis that the hoges eaten, and no man gaf him." And Chaucer in his Parson's Tale, quoting the portion of Scripture in reference to gluttons, says—"Their *wombe* is their God." It is in this general sense, which was the old English meaning, the term continues, in the Scotch form, to be used in Scotland.

To those words which have meanings which are now obsolete in England, we may here subjoin words which are there themselves obsolete, but are nevertheless still common in Scotch. For convenience, we distribute them into two classes—namely, 1, such words as may still be traced and recognised in England, and 2, such as are now wholly obsolete and out of use there, but still retained in Scotch.

To the *first* class belong such words as to *fare*, meaning to go, to pass, to journey—which we still recognise in boat and cab *fares*, or passage money.

In the poem of *Peebles to the Play* we read "There *fare* a man to the holt." *Fure* is the past tense of the verb to *fare*, and the line is equivalent to saying—There went a man to the holt or wood.

The *Gab* is the mouth, and thence by extension to talk, which we recognise in *gabble*, to talk idly.

The *Lug* is the ear, which we recognise in the phrase to *lug one along*, meaning to haul or pull along as by the ears.

To *reck* is still part of the language in the word *reckless*, meaning inconsiderate, careless, regardless.

We have the past tense of the verb in the old ballad of Sir Tryamore :

" There was many a seemly man,
Mo than I tell you can,
And of them all he na *raght*."

And in Burns's language—

“ And may ye better *reck* the rede
Than ever did th' adviser.”

To *kep*, meaning to catch, to intercept, in which latter word *intercept* we may still recognise the verb.

The word occurs in Chaucer :

“ These sely clerkes rennen up and down,
With *kepe*, *kepe* ; stand, stand,
Ga whistle them, and I shall *kepe* them here.”

—*The Reves Tale*, p. 122.

The Scotch word *wauf* or *waff* appears to be the English *waif* or stray.

To the *second* class belong such words as—

To *ettle*, meaning to aim at, to purpose. To *host*, to cough. To *skael*, to disperse, to scatter. To *steek*, to close, to shut up. To *skelp*, to give one a stroke. To *speir*, to ask after, to enquire for.

Such words as these are wholly obsolete in England, and out of use in English, and they seem to carry us back to a remote and early period in the history of the language.

The only topic which remains to be noticed here is the conjugation of verbs. Generally speaking the Scotch preserve the verbs regular. They also preserve the present tense of the verb *to clead*, whereas the English have adopted the verb *to clothe*. *Clothe*, *clad*, *clad*. And in the past tense of the verb *to go* the English have incorporated what appears the verb *to wend*, *go*, *went*, *gone*, whereas the Scotch say *gae*, *gaed*, *gane*.

Clead—

“ O wou ! quo he, were ye as black
As ere the crown o' my daddy's hat,
'Tis I wad lift thee on my back,
And awa with thee I wad gang.

“ And oh ! quo she, were I as white,
As ere the snaw upon the dyke, !
I'd *clead* sae braw and lady like,
And aff wi' thee I wad gang.”

This is from a piece ascribed to K. James V. of Scotland, and it is referred to here in order to illustrate the application of the present tense of the verb *to clead*.

Lough is used by Chaucer as the past tense of the verb *to laugh* :

“ Our host *lough* and swore.”

—*The Miller's Prologue*, line 6.

This is the *leugh* of the Scotch.

I have thus run over in a curt and rapid way some of the more striking peculiarities of the Scottish language,—and if the view here suggested is correct we may trace how it was that the language became separate and a peculiar dialect ;—especially when we consider that the Scottish language never entered on the noble course of improvement and cultivation with which the English was favoured, but on the contrary remained stationary and uncultivated, never having been subjected to the rules of grammar or orthography, and many times disfigured by being made the vehicle of words at variance with the proprieties and decencies of life.

But when we pass on from the external form of the language to the sentiments and feelings it expresses we are no less surprised to find here a character so different from that of England. This character displays itself in various ways. It is seen in the power of the Scotch to form *diminutives*, little known to the English, and superior to the French, which impart so much pathos and tenderness to the language ;—in the Scottish *proverbs* which are full of the thought and humour of the common people ;—and in the Scottish *music* which is everywhere appreciated. But into these we cannot at present enter.

RELICS OF COVENANTING TIMES IN THE PARISH OF
IRONGRAY. By the Rev. THOMAS UNDERWOOD, Irongray.

WHEN I consider the more special work and aim of this Society it is with some degree of hesitation that I venture to read in your presence the paper which I have prepared upon the above-named subject. The relics to which I shall shortly refer belong to a dark and gloomy period in the history of Scotland—particularly in the history of Scotland's Church. In the belief that the memorials of covenanting times still existing in the Parish of Irongray possess some interest for us as an Antiquarian Society, I beg to treat them merely as objects of Archæological value.

I may refer for a moment to the name of the Parish—Kirkpatrick-Irongray—I have not been able to find any explanation of the name Irongray—Kirkpatrick is of course easily accounted for. I have discovered in old documents, viz., Presbytery and Kirk-Session records, that there have been various ways of spelling this name. In 1653 it is spelt Irnegray, and in 1694 the Presbytery records have it Airngray, while the Kirk-Session records of same date have it Irongray, the present form. In an inscription upon the Communion Cups, of date 1694, it is Iregray.

It is well known that this Parish occupies a prominent place in the history of Covenanting times in the South of Scotland, and that some very interesting and characteristic memorials of those times still exist within its bounds. Remembering that we have excluded from our notice the religious aspect of the times, we may nevertheless deal with the question as antiquarians. How came this Parish to be thus distinguished? What is the history of the relics which remain, and what reliable information can be produced regarding them?

I. In answer to these questions I remark firstly, that the situation of the Parish, its natural or topographical features, are such as must have been well suited to the circumstances of the Covenanters. It formed a convenient meeting place

for those large conventicles of which we read. The north-west portion of the Parish consists of a considerable hill—if we may not dignify it by the term mountain—called the Bishop's Forest, and in a secluded glen or gorge near to the top of this hill the Covenanters frequently met, and they have left on the spot significant memorials of the object for which they there assembled. I refer to the "Covenanter's Tables," or as they are commonly designated "The Communion Stones," and so far as I know they are the only relics of the kind that have been preserved to our day. These tables consist of four rows of large stones, each row containing about 30 seats, and at one end there is a circular heap or pile of stones a few feet high, on which the Communion elements were placed, and beside which the officiating minister must have stood in dispensing the holy ordinance. Considering the circumstances of the Covenanters, no place could have been selected more suitable for their purpose. In that moorland solitude the congregation would be completely concealed from the view of any one, but a short distance removed, and it is exceedingly probable that at the time the lower part of the valley was covered with natural wood, so that even in the act of assembling the people might have availed themselves of its screen. Besides, two or three sentinels stationed within sight and hearing of the assembly would have a commanding view of the surrounding country, and could easily have given the alarm, in the event of the appearance of the dragoons.

II. The Minister of Irongray, at the period of the Covenant, as it is called, became a zealous Covenanter. He was one of nearly 400 ministers who were ejected from their Parishes in 1662 when the Presbyterian form of Church Government was overturned and the Episcopal form established. As this man was connected with a somewhat distinguished family I may perhaps be allowed to mention one or two things regarding him. His name was John Welsh, and he was a great-grandson of the famous John Knox; his great-grandmother being the daughter of Lord Ochiltree,

Knox's second wife. Welsh's grandfather was John Welsh, minister of Ayr, who towards the beginning of the 17th century was banished to France, where he lived for sixteen years in the capacity of a Protestant minister. John Welsh of Irongray became a great Conventicle preacher, and he seems to have stirred up a strong Covenanting spirit among the Parishioners.

Wodrow, in his "History of the sufferings of the Church of Scotland," says, "The first open opposition to the settlement of the curates I have heard of was at Irongray, where Mr John Welsh was minister." (See Hist., Book I., chap. IV., page 177, fol. edition.)

I find that Welsh was licensed as a preacher by the Presbytery of Glasgow, and ordained minister of Irongray in the year 1653. He left the parish in 1662, and was ever afterwards one of the staunchest covenanters. He took part in the Pentland rising, and had a narrow escape in that unfortunate encounter. Large sums of money were offered for his capture, but he never was taken.

I have heard that he died in Jamaica, but whether his death occurred before or after the Revolution settlement I have not been able to ascertain. His name is not in the list of ejected ministers mentioned by Wodrow as alive in 1688.

There was a very large conventicle held at the Communion Stones some time about 1678, when Welsh and Blackadder, and other ejected ministers, officiated. It was computed that over three thousand persons partook of the communion on that occasion.

There is a tradition still extant in the parish to the effect that the communion cups which originally belonged to the church were used on the occasion of the great conventicle at Communion Stones on Skeoch Hill, and that they were concealed somewhere in the neighbourhood and lost. In connection with this tradition I may mention a reference to the said cups which I find in the Kirk Session Records, dated July 4th, 1697 :—"The cups, table cloths, and other utensils belonging to the church being amissing, and there being need

of them because of the sacrament of the Lord's Supper, which shortly is to be administrat, it is laid upon every elder to lay out themselves as much as they can in making enquiry after them to see if they can be found." The next meeting of Session is dated July 11th, 1697, and the elders then give in their report concerning the matter of the cups, and it is to the following effect:—"The several members of this judicatory, having made search after the utensils of this church, can hear nothing anent them, only that they were carried away with Mr John Welsh, his plenishing."

The communion cups now in use in the Parish Church bear the following inscription:—"Thir cups were gifted for the use of the Paroch of Irengray, by Mr James Guthrie, who was ordained Sept. 13th, 1694. Mnry."

It is rather a remarkable circumstance that the sacrament of the Lord's Supper was not dispensed in the parish till 1697,—9 years after the Revolution, and 6 years after a minister had been settled. In the Session Records, which are still preserved, commencing June 11th, 1691, there is no mention of a communion till 11th July, 1697, when the enquiry about the communion cups is mentioned, and most minute instructions given about the sacrament, which was to take place on the following Sabbath.

III. I shall now refer shortly to the well-known martyrs' graves near Irongray Church. On the 2d March, 1685, six covenanters were captured in the Bog of Lochinkitt, within the Parish of Kirkpatrick-Durham, and close upon the confines of Irongray. Four of them were shot where they were taken, and the remaining two were brought through Irongray and hanged on the following day in a clump of oak trees near the Church, and there buried. A rude stone has for generations marked the spot, bearing the following inscription:—"Here lyes Edward Gordon and Alex. M'Cubbine, martyrs, hanged without law, by Lag and Captain Bruce, for adhering to the Word of God, Christ's kingly government in his house, and the covenanted work of Reformation against tyranny, perjury, and prelacy, March 3d, 1685.

“ ‘ As Lag and bloody Bruce command,
We were hung up by hellish hand ;
And thus their furious rage to stay,
We died near Kirk of Irongray.
Here now in peace sweet rest we take,
Once murdered for religion’s sake.’ ”

Some years ago the old stone which lies flat on the ground over the graves of the two martyrs was enclosed with a railing, and a monument was erected, which bears an inscription to the effect that a sermon was preached in Irongray Churchyard by the Cameronian minister of Dumfries of that time (the Rev. Mr M'Dermid) ; and with the proceeds of the collection made on that occasion the surrounding railing and monument were erected, to testify the sympathy which the present generation felt for the principles of the Covenanters. Now, certainly, I have nothing to say against the feeling which prompted the erections referred to, but I question very much the taste which has been displayed : in fact, as an antiquarian, I think the effect which the old stone itself was fitted to produce has been greatly marred. It is fortunate, I think, that no such attempt at embellishment or modernizing has been made at the Communion Stones. There is a meaning in the very bareness, rudeness, and simplicity of these memorials which the hand of the renovator tends to weaken rather than intensify.

I shall conclude this paper by a short account of the two interesting relics which I now exhibit to the Society. They are a Covenanter's Banner and the Sword of the Standard Bearer. Their story is soon told, and I am sorry that my information respecting them is not more complete. As it is, I believe it to be quite authentic. These relics belong to a family residing in the parish, and have been handed down from one generation to another, and carefully preserved. Their history, however, has dwindled down to the merest tradition. The person who now owns them knows only that one of his ancestors, of the name of Clerk, carried them at Drumclog and Bothwell. The banner is of home-made linen,

and bears the motto, "Covenant for religion according to the Word of God, Crown, and Kingdoms." The Thistle is rudely imprinted on each of the four corners: the size of the Banner is about 5 feet by 4. The Sword which accompanies the Banner is not in good preservation. It is two-edged, and made of excellent steel.

That the above relics are genuine there can be no doubt. On comparing the Flag with some in the Antiquarian Museum at Edinburgh, I found a marked correspondence between its motto and the mottos of the Covenanters' Banners in possession of the Edinburgh Antiquarian Society.

I may be permitted to quote a single line from a well known Christian poet expressive of the contrast between our own happy and peaceful times and the times of the Covenant—

" O blissful days !
When all men worship God as conscience wills."

The first thing I noticed when I stepped
 out of the (1944) door, was that the air was
 so much more fresh and clean than it had
 been in the past few years. It was a relief
 to breathe in the fresh air after being
 stuck in the city for so long. The streets
 were so much more pleasant to walk on
 now. The sidewalks were clean and the
 buildings were so much more beautiful
 than they had been in the past. It was
 a wonderful feeling to be back in the city
 and to see everything so much better than
 it had been. The people were so much
 more friendly and the atmosphere was
 so much more relaxed. It was a great
 feeling to be back in the city and to see
 everything so much better than it had
 been. The people were so much more
 friendly and the atmosphere was so much
 more relaxed. It was a great feeling to
 be back in the city and to see everything
 so much better than it had been.

Conclusion

In the end, the city had changed so much
 that it was almost unrecognizable.

THE TRANSACTIONS

AND

JOURNAL OF THE PROCEEDINGS

OF THE

DUMFRIESSHIRE & GALLOWAY

NATURAL HISTORY

AND

ANTIQUARIAN SOCIETY.

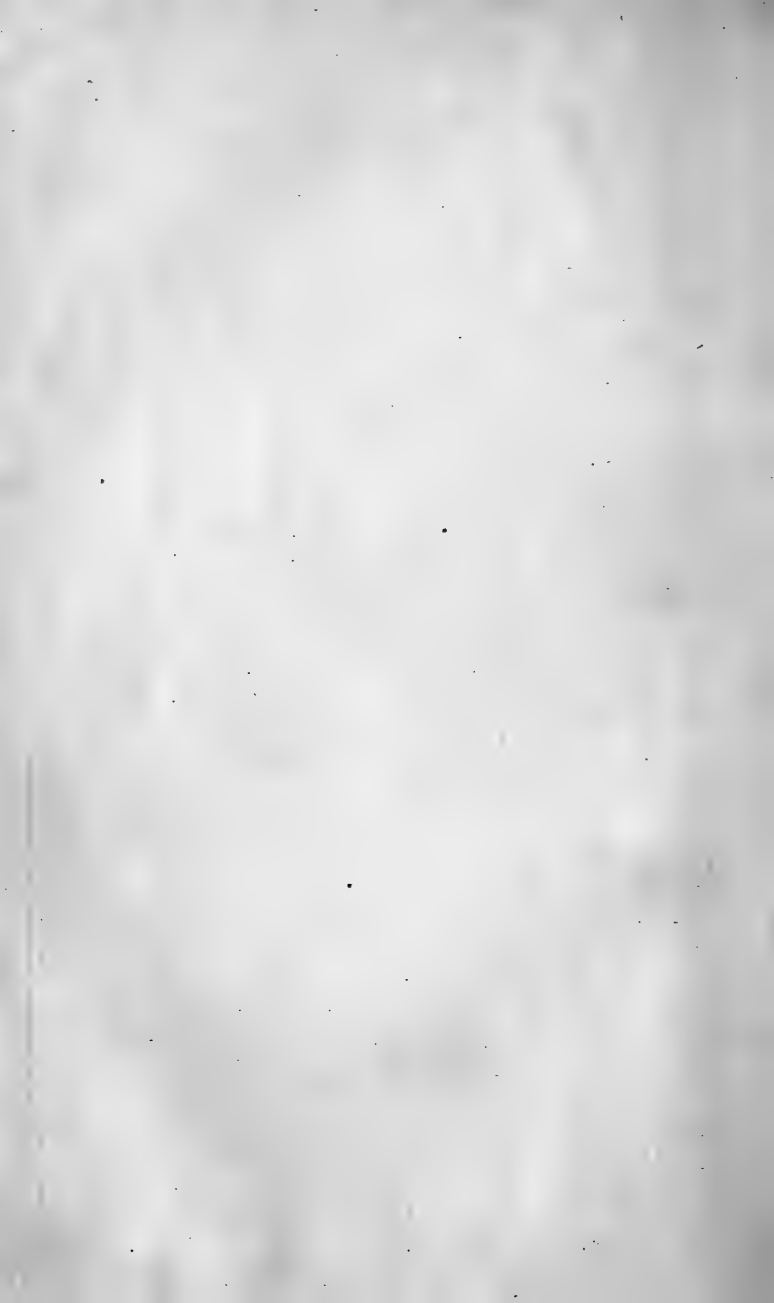
SESSION 1867-68.



DUMFRIES:

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

1871.



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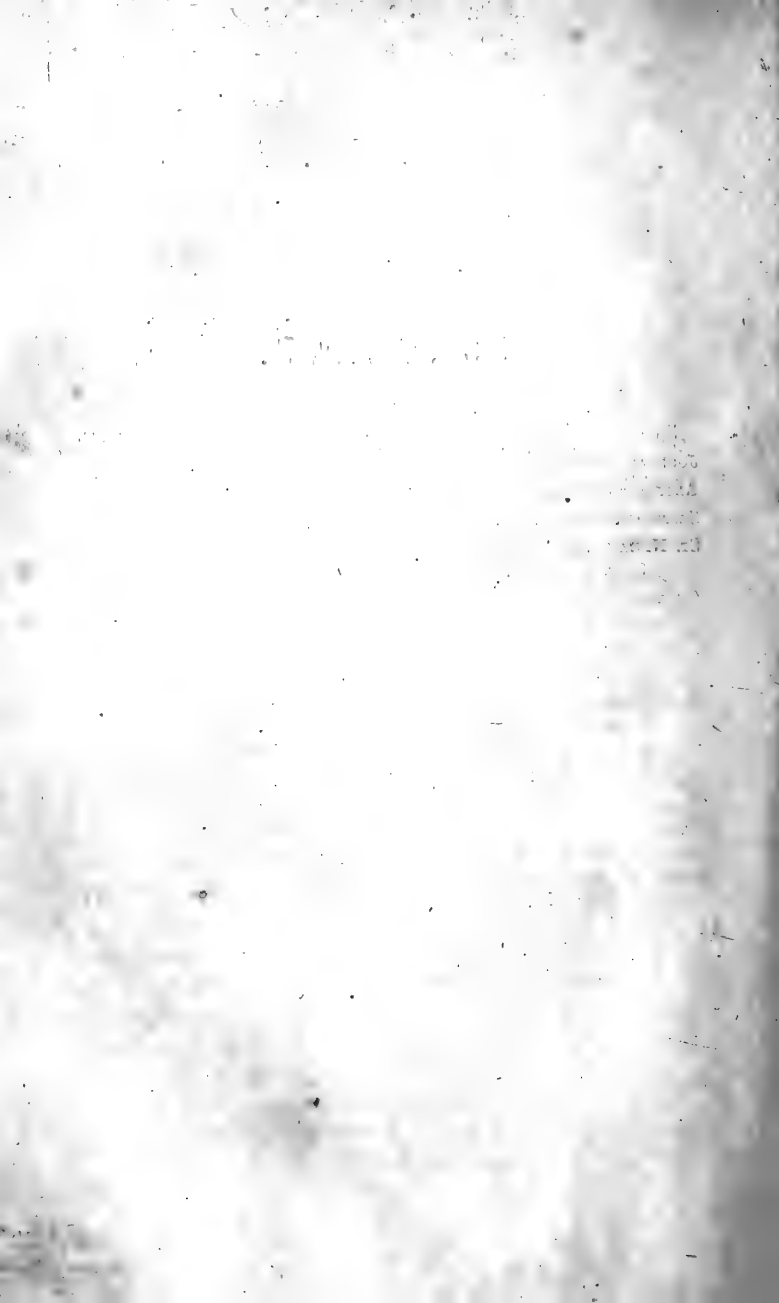
1871.

1800

1800

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JOURNAL OF THE PROCEEDINGS

OF THE

*Dumfriesshire & Galloway Natural History and
Antiquarian Society.*

October 30th, 1867.

AT a Meeting of Committee held in their apartment in the
Dumfries and Galloway Club Rooms,

Sir W. JARDINE, Bart., in the Chair,

Dr Dickson having intimated his resignation of the Secretaryship of the Society, having accepted a situation in the Island of Mauritius, it was proposed by him and seconded that Mr M'Diarmid should be requested to accept of this office.

Dr Gilchrist, Crichton Institution, was requested to take the office of vice-president, in room of Mr Maxwell of Breoch, which he accepted.

It was proposed and agreed to that Mr Dudgeon of Cargen should be requested to accept the office of vice-president, in the place of Mr Starke, Troqueer Holm, who retires in the order of rotation. The election of new members of committee was considered, when the following were nominated in room of the gentlemen retiring from that office in order of rotation:—Sir William Broun, Bart.; Major Bowden; Mr Crombie, Architect.

Sir W. Jardine presented to the Society a pamphlet entitled "Sculptured Stones of Eastern Scotland."

November 5th, 1867.

The Society held the First Meeting—being the Annual Meeting—in their apartment in the Dumfries and Galloway Club Rooms.

DR GILCHRIST in the Chair.

The Minute of the Meeting held on 30th November was read and approved of.

The Secretary's Annual Report, as prepared by Dr Dickson, was read and approved of. A unanimous expression of regret was directed to be recorded of the loss the Society had sustained through the removal of Dr Dickson, who had held the office of Secretary to the Society since its formation.

Sir W. Jardine, Bart., was unanimously re-elected President of the Society, and Mr J. G. Clark, Dr Gilchrist, and Mr Dudgeon were elected as Vice-Presidents. Mr Murray was unanimously appointed to be Secretary, and Mr Corrie as Joint-Secretary with him. Mr Corrie was also appointed Treasurer, and Mr Starke was re-appointed Curator of the Museum and Library.

The meeting appointed as a committee to examine and arrange the papers, &c., belonging to the Society, left by Dr Dickson, late Secretary, and also to catalogue the books, &c., in possession of the Society, and the articles in the Museum—Mr Starke, Dr Gilchrist, and the Secretary.

The Secretary was directed to collect the papers for the next Journal of the Society and submit them to the President with a view to their publication.

Mr Corrie gave notice that he would propose at next meeting as ordinary members, George Hamilton, Esq., and Dr John Shand, of Kirkecubright, and Mr James Blacklock, merchant, Dumfries. Dr Kerr gave notice that he would

propose, as a corresponding member, Mr John Hunter Broadwood, Carluke, Vice-President of the Geological Society of Edinburgh. Dr Gilchrist gave notice that he would propose Dr Rose, Wigtown, Dr White, Whithorn, and Dr Sharpe, of Thornhill.

December 3d, 1867.

The Society held the second meeting of the session in the Assembly Street Club Rooms.

Mr STARKE in the Chair.

The minutes of first meeting were read and approved of.

The Secretary reported that he had put the M.SS. and papers read during last session into the hands of the President. The Treasurer submitted his accounts, which were examined and audited. The roll of members of those who had died,—had removed,—or who had declined to continue to pay their subscriptions was read; and it was recommended that a list of members as adjusted should be printed with next Transactions. It was remitted to the ordinary committee to take into consideration the question of supplying corresponding members and other societies with copies of the Transactions, and to report to the next meeting.

The following members were enrolled :—*Ordinary Members*—James Blacklock, merchant, Dumfries; George Hamilton, Steward-clerk, Kirkcudbright; John Shand, M.D., Kirkcudbright; Dr Rose, Wigtown; Dr White, Whithorn; Dr David Sharpe, Thornhill. *Corresponding Members*—Mr John Hunter, Broadwood, Carluke; Miss Beecher, Manchester.

Mr Starke, the retiring President, read the Annual Address, and, on the motion of Mr James Frazer, a cordial vote of thanks was awarded to him for his valuable Paper.

Dr Sharp, M.B., read a paper by himself on "Additions to the Catalogue of British Colcoptera," and exhibited an interesting collection of rare species.

A paper by Mr Gibson on Ancient Pipes was read by the Secretary, which advanced the opinion that the pipes were not of older dates than the first introduction of Tobacco. Dr Gilchrist mentioned an instance of one of those ancient pipes being found surrounded with Roman pottery, and of the discovery of one by himself in a peat bog in Cornwall.

Mr Corrie read a notice of the discovery in the house occupied by the late Mr Young, P.F., of a copperplate engraving of the Old Bridge, Dumfries, and of an old print of Daniel in the Lions' Den, of date 1790. Impressions were exhibited.

Dr Gilchrist mentioned the discovery by himself during the summer of two Camps, one on the road from Greenmill to Old Quay and one still more obvious near the east end of the Viaduct of Goldielea, which he recommended to the investigation of the Members. He also exhibited an interesting series of minerals from the Waldensian Valleys and the Gothard Pass.

January 7th, 1868.

The Society held the third meeting of the session in the Assembly Street Club Rooms,

Dr GILCHRIST in the Chair.

The minutes of last meeting were read and approved of.

The following Gentlemen were enrolled:—*Ordinary Members*—John Carlyle Aitken, Dumfries; A. J. Harkness, Solicitor, Dumfries; and J. R. Wilson, Solicitor, Sanquhar.

Mr Hogg presented a number of dried specimens of plants prepared by him for the Society's collection during the previous Session.

Mr James Shaw, Tynron, read a paper on "Right Hand Superiority." This paper called forth an animated and instructive discussion. The Secretary, in the absence of Mr

Starke, read a notice of some ancient relics found in the parish of Dalry communicated in letters from Dr Robert Trotter to Mr Starke. The relics were—1, A large spear head, $7\frac{1}{2}$ inches in length, found in a moss when casting peats. 2, A large and heavy stone hammer, 13 inches long by 5 broad at the aperture for the shank, found in a large Cairn. 3, An arrow or dart head of red coloured flint found near the Cairn when making a drain. 4, Three large round water-worn stones, one of them hard millstone grit, part of a large pavement of similar stones turned up by the plough in the parish near the ruins of a building at a place called Chapel Leys, sometimes Chapelyard, similar to a pavement found in the Cheviots, described in the Border Sketches by Mr Hardy as the floor of an ancient house of the Britons.

Dr Gilchrist presented the Society a copy of the Meteorological Report kept at the Crichton Royal Institution for the year 1867.

February 11th, 1868.

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

Mr M'DIARMID in the Chair.

The minutes of last Meeting were read and approved of.

Mr Corrie presented to the Society a Stone Hammer recently found on the lands of the Moat of Troqueer, with a notice of the circumstances of its discovery and the locality.

Mr M'Diarmid exhibited part of a stone celt sent to him by Mr Hamilton, Steward-Clerk, Kirkcudbright, and which had been found in the neighbourhood of Kirkcudbright, on the rising ground overlooking the eastern side of the River Dee.

Dr Gilchrist read a paper on the physical geography of the Southern Alps, as illustrative of modern geographical

theories. The Secretary read several extracts from letters by Jas. Barbour, Esq., Bogue, to Dr Trotter, Dalry, relating to the supposed ancient pavement and other antiquities at Chapel-leys, parish of Borgue, which mentioned various circumstances requiring further investigation.

James Starke, Esq., read a paper on "The Scottish Language," * directing attention to a number of marked peculiarities in the Scottish vernacular, as compared with the English. The paper excited an interesting and animated discussion.

Dr Grierson, Thornhill, read a very interesting paper on "The Growth of the Mistletoe," from observations conducted upon a plant in his own garden.

A highly valuable paper was read by W. H. M'Nab, M.D., Edinburgh, "On the Metamorphosis of some of the Lower Animals," which was illustrated by a series of drawings of the principal species described in their singular changes of form and structure. The animals described by Dr M'Nab belonged to several families of zoophytes and other elementary forms of life; the history of which, so far as yet known to naturalists, has opened up so wide a field for scientific investigation and speculation; some of the generalizations made by Dr M'Nab were of a very interesting and important kind.

March 3d, 1868.

The Society held the Fifth Meeting of the Session in the Assembly Street Club Rooms.

DR GILCHRIST in the Chair.

The minutes of last meeting were read and approved of.

The following gentlemen were enrolled:—*Ordinary Members*—James Barbour Esq., Bogue, Dalry; W. O. Macqueen Esq., banker, Sanquhar; James Halliday Esq.,

* Note.—In last year's Transactions, p. 49.

architect's assistant, Dumfries ; David Boyle Hope Esq., sheriff-substitute, Dumfries.

Mr Murray presented a copy of the proceedings of the Philosophical Society of Glasgow, sent to him by the Rev. H. W. Crossley, of Anderson's University, for exchange with the Society ; and the Secretary was intrusted to return a copy of the last year's Transactions and of that now being printed.

Mr Starke moved, seconded by Mr Aitken, that a small committee be appointed to make enquiries as to the desirability of procuring another room for the Society's meetings, and particularly a room which Mr Aitken learned was likely to be available. Mr Maxwell, seconded by Mr Corrie, moved that the matter be delayed in the meantime. On being put to the meeting, Mr Maxwell's motion was carried by a majority.

Dr Gilchrist exhibited a very complete and interesting collection of land and fresh water shells. Dr M'Nab exhibited several cases of rare and beautiful coleoptera.

David Sharp, Esq., M.B., Thornhill, read a paper "On Variations in Insect Life, with especial regard to the theories of Lamarck and Darwin." Dr Sharp epitomized the remarks of French naturalists on these investigations, and concluded by recommending the members who were interested in these questions of natural history to conduct experiments of the same kind for themselves. The paper excited a lively conversation on the question how far scientific discoveries had supported or discredited the Darwinian theory of the origin of species. Dr Sharp remarked that such was the situation of the controversy that it depended entirely on how a person selected his facts, whether they date on the one side or the other.

Mr Corrie read a short paper on the discovery of an ancient grave on the farm of Broomhill, parish of Lochmaben, on the 21st August last, * and exhibited fragments

* See last year's Transactions, p. 43.

of bone and several teeth which were found in the cist ; also, pieces of a cinerary urn of unbaked pottery, which was unfortunately broken in its removal from the grave.

April 7th, 1868.

The Society held the Sixth Meeting of the Session in the Assembly Street Club Rooms.

The minutes of the last meeting were read and approved of.

James A. H. Murray, Esq., London, was enrolled a *corresponding member*.

The Secretary reported the suggestions of the committee with regard to the summer excursions.

A short paper was read by Mr Corrie, from Mr William Gibson, descriptive of the finding of an ancient celt and urn handle in a Roman camp at Carzeild, Kirkmahoe, which were exhibited.

Mr W. R. M'Diarmid read a paper on "Feasting at Funerals,"* founded on some ancient documents containing the accounts rendered for liquors and provisions supplied at the funeral of Sir Robert Grierson of Lag, in 1733, which threw some interesting light on the manners of the period.

A paper was read by Dr Grierson of Thornhill on "The Extinction of Species." Dr Grierson exhibited a tibial bone of the Dinornis or great Moa Bird of New Zealand, and a set of the bones of the Dodo from Mauritius, explaining what was known of the remains of these singular extinct birds. A lively and interesting discussion ensued on the subject of this paper.

April 29th, 1868.

A meeting of the Committee was held to arrange the summer excursions.

* See last year's Transactions, p. 46.

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

Present—Sir Wm. Broun, Dr Gilchrist, Mr Carlisle, M. Robert Murray, Major Bowden, Mr Corrie, Mr A. D. Murray. It was agreed that the first field meeting should be held at *Auldgirth* on the 9th May; that the June Excursion should be to *Moffat*; that for July to *Parton* and *Dalry*; August, to *Lochmaben*; September, *Auchencairn* and *Dalbeattie*; and October, to *Carlaverock* or *Torthorwald*.

May 5th, 1868.

The Society held the Seventh Meeting of the Session in the Assembly Street Club Rooms.

DR GILCHRIST in the Chair.

The minutes of the last meeting were read and approved of.

Dr Menzies, Wanlockhead, was enrolled *ordinary* member.

In the absence of Mr Jas. Starke, F.S.A. Scot., the Secretary read a paper by him on "St. Querdon's Well,"* on the farm of Barbush of Cargen, which contained some interesting speculations on the origin of the name.

Mr James Shaw, Tynron, read a paper on "The Influence of the Human Period on the Sagacity of Animals," in which he cited numerous illustrations in support of the theory that association with man or warfare against him had gradually educated certain species of animals to a higher degree of intelligence and brain power, the quality being transmitted hereditarily through successive generations.

Dr Gilchrist read a paper on "The History of a Crichton Boulder," which, taken as a test or typical boulder dug up in the grounds of the Crichton Royal Institution, described the various agencies which had been at work in its formation.

A beautiful stuffed fox was presented to the Society by Mr Heron of Duncow.

* See Paper in last Transactions, p. 44.

ABSTRACT OF TREASURER'S ACCOUNTS.

YEAR 1867-8.

<i>Dr.</i>					
1867-8. By Balance in hand from last year,	£0	10	1		. £3 5 0
By Arrears recovered,	. 4	5	0		. 2 10 0
By 97 Subscriptions for 1867-8,	. 24	5	0		. 3 14 0
					. 0 12 0
					. 1 2 0
					. 2 17 6
					. 12 17 0
					. 2 4 7
					. £29 0 1
					. £29 0 1

TRANSACTIONS.

SECRETARY'S REPORT FOR SESSION 1868-9.

THE Secretary has to express his regret that at the commencement of last Session no Presidential address was delivered, and that generally there has not been evinced among the Members so warm an interest in the success of the Society as is desirable, if it is to go on and prosper. Specially is this remark applicable to the Field Meetings, which, with the exception of the Joint Meeting with the Berwickshire Club, were carried out almost invariably by some half-dozen Members. It is hoped, however, that this state of matters will not longer continue, and that greater interest will be manifested in the Society's proceedings.

The Secretary has further to report that owing to a considerable number of removals from the district, some deaths, and a few withdrawals, the number of ordinary Members for the ensuing Session, as they stand at present, is decreased by 11—leaving 89 on the roll. As, however, there are many gentlemen connected with the district who ought to be Members of such a Society, but who are not, efforts should be made to get them enrolled, so as to ensure a successful Session.

The Treasurer's accounts having been examined are now before the meeting, showing a balance due him of 7s. 11d. as at this date, while there are arrears, the most of which will yet be recovered, amounting to £6, 15s. and no debts.

In regard to the proper business of the Society the Secretary has to report that in the proceedings printed every information will be found.

The Field Meetings for the Session were fixed as follows, viz. :—

Carlaverock,.....	<i>May.</i>
Parton,.....	<i>June.</i>
Castleton to meet Berwickshire Club,....	<i>26th June.</i>
Barjarg, &c.,.....	<i>July.</i>
Tynron, &c.,.....	<i>August.</i>
Rockhall, &c.,.....	<i>September.</i>

The day fixed for the May Meeting proved so wet and cold that the gentlemen who had made arrangements to be present were obliged to adjourn till the following month, when, instead of going to Parton, a select party of six visited Caerlaverock and the district, inspected with interest the Geological formations exhibited in two quarries, one near Chapelhill, and the other on the shore of the Nith below Glencaple. They also visited a British Camp, now planted, on the farm of Chapelhill, and the larger and very striking similar Camp on Wardlaw hill, overlooking Caerlaverock Castle. This camp, also planted, was at the time literally blue with wild Hyacinths, and a number of a pure white variety, not uncommon in the district, were found. Caerlaverock Castle, so well known, was next visited, and then the site of the older Castle in the wood behind, the foundations of which were exposed a few years ago through the exertions of the late Mr Maxwell of Breoch. In proceeding through the wood many beautiful plants were seen and noted.

The Meeting at Barjarg, &c., on 1st July was a most enjoyable and instructive one, and the party was a little more numerous.

By the kindness of Mr Hunter Arundell the party had free access to his splendid collection of valuable books, missals, medals, &c., and were highly gratified thereby. They also carefully inspected the Old Tower of Barjarg, forming

part of the Mansion House, and some large trees growing in the Policies. The Barjarg Lime Works, in the immediate vicinity, which are wrought as a mine, with a horizontal entrance, were also inspected. As indicating how plentiful and familiar roe-deer are now in the County, it may be noted that some were seen close to Barjarg House lying within a few yards of the avenue and not stirring as the carriage drove past.

Proceeding from Barjarg the party passed on to the Glenmidge Valley, in which Lag Tower is situated, and which they visited. It is now little better than a heap of stones, and interesting only for its name. A Barn Owl was scared from its roosting place in the ruin by the party's visit. In a field near by among a heap of stones, wild Fennel was found in abundance. The party proceeded down the valley to Auldgirth, and thence home.

The valley (Glenmidge), apart from the fact of "Lag Tower" being in it, is specially interesting, owing to the tradition that at one period the valley of the Cairn, above Dunscore, was a great lake, the overflow from which passed through Glenmidge and so down into the Nith below Auldgirth. Tradition farther says that by the orders and exertions of the "Monks of old," the rocky barrier at Dalgonar Mill below Dunscore village was cut through, and the lake drained and much land recovered. Looking at the configuration of the country, and the valley of Glenmidge, which is a peat moss in great measure, the truth of the tradition seems not only possible but probable. In confirmation of this, it may be noted that in Camden's *Britannia* he speaks of "Glencairn on the Lake."

The Castleton meeting was numerously attended, and the various objects of interest in the neighbourhood, including Hermitage Castle, were visited.

The morning of the 26th June was that on which it had been arranged that a meeting with the Berwickshire Na-

turalist Club should take place at Newcastleton ; and the morning proving fine, a considerable party started early, and reached Newcastleton shortly after 10 o'clock, where they met Sir Walter Elliot, President of the Berwickshire Club, and various members. Several visitors had also joined.

Upwards of thirty sat down to breakfast, and it was afterwards arranged that one party was to drive to Hermitage Castle and afterwards to walk to Riccarton Station, while those of the Dumfries party would return to Newcastleton, and depart without remaining to dinner, owing to its being impossible otherwise to catch trains which would enable them to reach home that night. This was not foreseen when fixing the plan of meeting, and sadly interfered with the party. Another party was to proceed on foot down the Liddell, under the intelligent guidance of Messrs John Elliot and Adam Noble of Newcastleton.

The party to Hermitage explored the Castle, and returned as already mentioned, but we saw no record of what was done, and would refer to the history by Sir Walter Elliot, given in his excellent address to the Berwickshire Club, to which we refer our members.

The pedestrians were first directed to a fine old cross a little down the road, said to mark the spot where the body of a former Armstrong of Mangerton who was horribly murdered by the Lord of Hermitage, was set down on its way to the Churchyard of Etleton, higher up the hill.

About 300 or 400 yards up the hill is the Churchyard of Etleton, the burial place of the Armstrongs, some of whose tombstones, with armorial bearings and long inscriptions, were examined. A portion of the party crossed the Liddell and inspected the ruined Tower of Mangerton, the stronghold of the chief of the Armstrongs. All that now remains is the ruined lower storey, in the west wall of which is a sculptured stone bearing the Armstrong effigy,—not as stated by Nisbet, but the common one of an arm and two-handed sword, with the date 1580. This party afterwards joined that which had

preceded them on the Tweeden Burn, the rocky banks of which, clothed with natural wood, were much admired. The lower part of the glen, where it joins the Liddell, presents some good geological sections of the mountain limestone, in which the *Rynchonella pleurodon*, *Productus giganteus*, and *Terebratula succulus* were very abundant; and *Fenestella plebeia*, *Ceripora rhombifera*, *Glauconome pluma*, a *Polypera*, and some others covered the surface of the slabs. The water penetrating through the limestone is impregnated with calcareous matter in solution, which is deposited extensively on the twigs, grass, and foliage in the bed of the stream. Large quantities of this deposit are carried off for ornamental gardening, several tons having been carted during this year.

No new plants were found. *Typha latifolia* filled some small ponds beside the stream; *polypodium phægopteris* and *dryopteris* were observed, and many mosses were picked by Mr Jerdan. *Oenanthe crocata*, which was growing at several places, attracted attention, and Noble, one of the guides, stated that it was eaten by the sheep. Goats eat the plant with impunity, and the same animal browses freely on *Eorphorbia* in eastern countries and in the island of Malta, so much so as to affect the milk, which is poisonous when drunk by human beings, though the plant is innocuous to the goat. *Pyrola rotundifolia* was found in a glen below the village.

For the Tynron meeting in August only 4 Members left Dumfries, and on arriving at Thornhill they were met by Dr Grierson, who showed them his very extensive collection of rarities, both dead and living, and as the season was very hot and the grass on the "Doon" burnt up, he succeeded in persuading them not to attempt the ascent, but to visit instead the shady groves of Crichope Glen. It appeared, however, that some few members in the district had actually dared the ascent of Tynroon Doon, and inspected what are supposed to be the remains of an old Fort of some kind on the top of it.

The last Field Meeting was at Rockhall, &c., on 16th September.

The party (again of six) proceeded to Racks by train, and thence walked to Rockhall House, near which they inspected the remains of a Stone Cairn. Passing to Rockhall-head they examined the site of what is said to have been an ancient chapel, but of which there is now no trace. They discovered what was not previously known to any of their number, that the farm-steading itself stands on the site of an ancient camp, of which the fosse or ditch is still very distinct on one side. Within a short distance overlooking the valley of the Nith, and commanding a most extensive and splendid view, is "Rockhall Moat," a striking conical mound of the usual description with a fosse round it, but hid and disfigured like so many more by being planted with trees.

Leaving the Nithsdale side of the hill, the party proceeded to the east of it towards Lochmaben, passing through a small but interesting glen known as Thorniewhat Glen. In this glen about two years ago Mr Robert Minto, Lochmaben, discovered growing near a small waterfall a very handsome plant of the *Pteris adiantoides*, an exotic but nearly hardy fern, but though anxious search was made no second one could be found. The puzzling matter is how an exotic fern came to grow on such an out of the way place. Instances, however, of a similar nature have occurred elsewhere. The party then visited a ridge on Thorniewhat farm popularly supposed to form a continuation of the ancient rampart or dyke known as the "Deil's Dyke," but on examination it was clear that the ridge in question was natural and not artificial, and was the result of the action of water or of a moraine.

TRANSACTIONS.

ST. NINIAN, THE APOSTLE OF GALLOWAY. By JAS. STARKE, F.S.A. Scot.

I had lately an opportunity of being in the town of Whithorn, where remains exist of an ancient Cathedral and Priory connected with the name of St. Ninian, the Apostle of Galloway.

And being there, I proceeded on some two miles or so to the Isle of Whithorn, where stand the bare and ruined walls of a chapel called St. Ninian's Chapel.

These remains are of great interest, and well worthy of a visit by the Society.

The Chapel at the Isle of Whithorn, it is reported, says Andrew Symson, who was Episcopal minister of Kirkcinner in 1684, was the first that was built for the service of Almighty God in this part of the kingdom—yea, as some say, in the whole kingdom.

The building is of small size, about 12 paces by 6, and is composed principally from the blocks of stone in the immediate neighbourhood.

In the town of Whithorn the ruins of the Cathedral are thickly covered with creeping plants, and the accumulated mound of *debris* is so great that entrance into the building is now by the eastern window of the edifice.

To the east of the Cathedral are traces of vaults which probably belonged to the Priory. In Andrew Symson's time several large and capacious vaults were firm and entire.

The earliest account of St. Ninian appears to be that of the venerable Bede, who died in 735, which was nearly 300 years after Ninian's death. And his next biographer is

Ailred, also an English monk, who wrote in the time of Fergus, Lord of Galloway, which was 400 years after Bede.

These two authorities are the main sources of our knowledge of St. Ninian.

The venerable Bede's account, which is the earliest, is this—that at a time long anterior to St. Columba, who was the apostle or great Christian missionary among the Picts of the north of Scotland, Bishop Ninian, it was believed, preached the gospel to the Picts inhabiting the southern parts of the country; after he had been instructed in the faith of Rome and in the mysteries of the Christian faith. At his episcopal seat, he continues, the famous Church of St. Martin of Tours was erected of stone, which was an unusual thing among the Britons, and designated *candida casa*, or the White House. And here his body and the bodies of many saints rest in peace.

The venerable Bede describes Ninian as by birth a Briton. Ailred adds he was of a family not ignoble, *haud ignobili familia*, and that his father was a king, and in religion a Christian.

Ailred and later biographers indulge themselves largely. And Dr Murray, in his Literary History of Galloway, says Ninian was descended of royal parentage; and born, it is supposed, near Leucophibia (of Ptolemy), the present Whit-horn, in the year 360.

At this early period of our history the district would be inhabited by *Romanized Britons*, that is to say British tribes living under the sway of the Romans.

These tribes were numerous throughout the island; and each of them, like our Highland clans, had its own chief or king.

In this district of the island the British tribes were the *Selgovæ* of Dumfries and Kirkcudbright, and the *Novantes* of Wigtownshire.

The common dwelling-house was of thatch and wattle or feal and divot with wicker work; and such is known in the

Highlands of Scotland as a *tigh dubh*, or black house, in contradistinction from the house of stone and lime, or white house, the *tigh geal*, or *candida casa*.

And for some time *spires* to the churches, as well as *choirs* and *chancels*, were unknown.

Ailred gives a detailed account of Ninian's personal character. But this account is probably imaginary, or largely traditional and legendary.

He determined on going to Rome, the seat, as he believed, of the successors of the Apostle Peter.

And to Rome he went.

This was a great undertaking in those days ; and may fairly be held as indicating the possession of good pecuniary resources, as well as a knowledge of the Christian religion, which had indeed already penetrated among the Cumbrian Britons.

Ninian remained at Rome many days, and, like the busy bee in a clover field, frequented all the meetings of the learned during his stay.

And then he went to see *Martin of Tours*, who is called his uncle.

This visit to St. Martin of Tours forms an era in the life of Ninian. And by it we are enabled, in a measure, to determine the time chronologically. For St. Martin of Tours died in the year 397.

Ninian would thus be at this time from 30 to 35 years of age.

• Martin himself had also visited Rome. He went out on foot, and had not proceeded far when he met the Evil One, who, in the course of a conversation together, upbraided Martin, taunting him with making such a journey on foot.

Martin's indignation was roused, and he seized him by the neck, whereupon the Devil at once succumbed, and became an animal of the asinine order. So, mounting on him, he jogged on pleasantly the rest of his way, making on his back the sign of the cross when he would have applied a spur, if he had had one, to increase his speed.

When they arrived at the Holy City, the Devil said—

*Signa te signa temere me tangis et angis,
Roma tibi subito notibus ibit amor.*

The visit of Ninian to St. Martin appears to have made a wonderful impression on Ninian, and, in point of fact, determined his character and subsequent life. St. Martin was his patron and exemplar. And being thoroughly indoctrinated in Martin's views, he, on his return to Galloway, set about erecting a cathedral and monastery at Whithorn, which was the capital or chief town of the *Novantes*.

A priory of Premonstratensen monks was afterwards founded at Whithorn by Fergus, Lord of Galloway, in the time of King David I. And the buildings which that Prince erected may constitute the ruins we now see at the place. But, from an anecdote which Ailred tells, and which he terms *a miracle among the leeks*, it is plain there existed in Ninian's time a fraternity of monks who were, no doubt, selected by Ninian himself when away abroad, and accompanied him in his journey home to Scotland. It was through their assistance also the first cathedral was erected.

It happened one day, says Ailred, that the blessed Ninian went in to the refectory to take a meal with the brethren, and not finding any vegetables on the table, he called the friar who had charge of the garden to know the reason why. Truly, father, said the gardener, whatever of leeks or such like remained I put in the ground to-day, and the garden has not as yet anything fit to eat. Go, said Ninian, and whatever you find take up with your hand, and bring it to me. The gardener went, and, wonderful to relate, says Ailred,—credible only to those who believe that to faith nothing is impossible,—he saw leeks and other kinds of vegetables growing and running to seed!

This is narrated by Ailred as a *miracle*, like many other things of Ninian, in his biography.

But the story is perhaps susceptible of an easy explanation. What Father Ninian said was perhaps to the follow-

ing effect :—You were too hasty, John, in saying there were no vegetables to be had. Examine again and you may find some you had overlooked. And the gardener goes accordingly and finds them. As to their *running to seed*, this only shows the friar an inattentive gardener.

Many noblemen and others, says Ailred, sent their sons to Ninian to be instructed in the holy scriptures and to be educated. And on one occasion when Ninian was preparing to castigate a youth the boy made off and endeavoured to get into one of the wicker boats of the time, when the boat upset and the boy was precipitated into the water. This was looked upon as an interposition of Providence, and the boy, pale and dripping, returned to his master.

This anecdote has probably reference to an early period of Ninian's career, when he was still at the Isle of Whithorn, where the sea is close at hand.

Ailred has some other anecdotes of Ninian.

Tudvallas, a chieftain of one of the British tribes, being taken with severe headache and blindness, sent for Ninian. The holy man came at his request, and, after prayer to God, he touched his head, making the sign of the cross, he was cured, and derived a new life both in body and soul.

On one occasion when visiting the huts of the people and looking at their flocks and herds, it occurred to him to bestow upon them his episcopal benediction. So, collecting all together in one place, he commended them to the divine care. He then blessed the house of every honest woman, and commended them for the night to God. And moved with pity for the men, with many prayers and tears he besought God for them, saying, You joke and jest and speak trifling things ; think of the soul and of a future state.

To St. Ninian, whose religious teachings and instructions were from Rome, the Roman usages were the rule and standard of christianity, and whatever differed from them was wrong or heretical.

In this way the celtic usages and the forms and practices sanctioned by St. Columba would have been obnoxious. But St. Ninian did not probably live to witness them.

Like other monastic worthies Ninian had his *cave*. And in the lands of Physgill, under a cliff by the sea side, Andrew Symson says here is a cave called *St. Ninian's Cave*, to which he was in use to retire for his more secret and private devotions.

The time at last approached that Ninian must die, and he passed happily out of this world, and, accompanied by angelic spirits, says Ailred, he ascended to Heaven, there to enjoy everlasting rewards.

His body was buried in his Cathedral at Whithorn, being placed in a stone sarcophagus, near the altar, in presence of both clergy and people.

And here the virtue which shone in him when alive was manifest also in his remains. The faith of believers was strengthened, the profane were terrified, and many diseased both in body and soul obtained cure and health.

Pilgrims from all parts of Scotland, from Ireland, and from the north of England repaired to the spot to pay their devotions and to be cured of their diseases. And the many *cairns* in the adjoining parishes in the line of journey testify to the sad casualties which overtook the invalid pilgrims on their way.

Such pilgrimages continued apparently up to the Reformation. King James IV. went many times. And on the 22d of June, 1506, a safe conduct was granted to Sir Wm. Tyrwhit and 16 Englishmen with him to come in pilgrimage to St. Ninian's.

Ailred speaks of the cures effected centuries previous. But, in his anxiety to exalt his "blessed Ninian," he narrates a circumstance which must be regarded as a pious fraud.

What Ailred says is to this effect—

The invalid suppliant, being brought into the church,

prostrates himself before the holy relics until the hour of vespers, when he is thrown upon the tomb of the blessed Ninian, saying, O holy Ninian, look upon this diseased frame, it is pitiable to see, but see it in thy compassion. We are wearied, we are sad, and can do no more. Here he lies, he lives or dies, he perishes or is cured, when lo! in the silence of the night an object appears in heavenly light, clothed in episcopal vestments. He approaches and touches the miserable suppliant, he bids him arise cured and to depart, giving glory to God his saviour.

If in such circumstances a cure was effected, and the influence of the mind on the body is wonderful, the cure must be due not to the relics. Ailred, however, does not advert to this, but concludes his narrative by supposing that the invalid devotes his restored health, and, becoming a shorn monk, dies in the community.

The *diocese* of Ninian is stated to have been the province of *Valentia*, which contained several British tribes.

But Ninian's fame spread throughout all Scotland. And churches and places were named after him or dedicated to him. And in the old church of St. Congan, at Turriff, in Aberdeenshire, a painting *in fresco* was discovered, representing an episcopal figure, full length, entitled in Gothic characters, S. NINIANUS. Here the Bishop appears in episcopal vestments with a mitre and pastoral staff, while his right hand is raised as in the act of pronouncing a benediction. *

In the Calendar of Scottish Saints the festival of St. Ninian is 16th September; and the date assigned to him is A.D. 437. This date would make his age at his death upwards of 75.

At this time the Romans were still in possession of the country, they not having retired from Britain till 446. After their departure the Picts and Scots combined to harass the Britons, and it is not unlikely that it was in these circum-

* See Proceedings of the Society of Antiquaries, vol. 6, p. 427.

stances the Britons erected the Devil's Dyke for their protection, sending up at the same time to the Romans the unavailing *groans of the Britons*.

Palludius was sent by Pope Celestine as apostle to the Scots of Ireland, and several years afterwards St. Columba came from Ireland and settled at Iona, in the Western Hebrides, and Kentigern or Saint Mungo, which last from Wales, in the 6th century re-founded the church of the Strathclyde Britons—the people of this district having, it would seem, relapsed after the death of Ninian—the Cathedral of Glasgow becoming its chief seat. The chief seats of the Columban Church being the monasteries of Iona and Lindisferne.

And after all these came St. Augustine, sent by Pope Gregory the Great, who became the great *apostle of the English*. This was not less perhaps than a century and a half after the death of Ninian, the apostle of Galloway.

ON THE MEANING OF THE NAMES OF PLACES IN THE NEIGHBOURHOOD WHICH ARE OF CELTIC ORIGIN. By M. MORIARTY.

I have been requested by some of our friends to explain the meaning of the names of places in the neighbourhood which are of Celtic origin, and I proceed to do so now with great pleasure ; but I may observe at the outset, that the present spelling is not always a sure guide to the meaning of the words, although as a general rule it does very well to preserve the sound, and thereby lead to the sense and meaning of them ; and when we consider the disuse of the language in the district for centuries back, I think we may be thankful that the spelling has helped to preserve the sound and sense of the words so well as it does.

Let us take *Traqueer* for example. We know by the sound, &c., that Traqueer is Celtic, but among other queer things we find the letter *q* in the spelling, and we know that there is no letter *q* in the Gaelic language ; the letter *q* was

therefore introduced by some one who did as well as he could to preserve the sound of the word as he heard it, and it is a remarkable fact that no other letter could have preserved it so well to an English speaking people, who, I suppose, did not understand the proper sounds of the Celtic or Gaelic letters. *Traqueer*, then, as far as its sound implies, and having regard to its situation, means a burying place on the coast, on the shore, or on the bank of a river,—I say “having regard to its situation”—because *Traqueer* consists of two words, each one of which has several different meanings, and if we were not thoroughly acquainted with the local situation or geographical position of *Traqueer*, we would be very apt to give it any one of the various other meanings which it admits of, and this shows that with regard to the names of places, &c., it would be necessary for the person who explains those names to see those places, because the same word may mean, and often does mean, different things, and in order to make sure of the right thing he should see the places, as already mentioned.

Loch Abar is easily explained. We know that loch means lake, and Abar means a marsh, or a boggy piece of land, and this answers exactly to our Loch Abar, but *Abbar* means also the mouth of a river, and we know from local knowledge that our Loch Abar is not at the mouth of a river, it is therefore on a marsh or boggy piece of land ; but, *Glen Cu*, near St. Mary’s Loch, is not so easily distinguished, for *Cu* is a greyhound, but *Cu* is also a warrior, hero ; and whether the glen got its name from the hound or from the hero, we cannot determine just now.

I find by the map that there are numerous places named after wild and domestic animals.

As :—Garrioch, a hare.

• Polmuck, the hog’s hole.

Polgown, the calf’s hole.

Drumshinnoch, the fox’s hill, or ridge.

Benbrack, the badger’s hill.

Glencapel, the horse's glen.

Glenmuckloch, the glen of the herd of swine.

Some places were named from different appearances of shade or color, as if by way of contrast with each other.

As :—Glenbuie, yellow glen.

Glendorch, dark glen.

Glenglas, green glen.

Glenleith, gray glen.

Places named from certain peculiarities of shape, or form, or position, &c.

As :—Glendyne, the deep glen.

Polmeur, the large hole.

Duneen (hill), little hill.*

Carnine, little heap.'

Knockangalie, the hag's hill.

Lincluden, { a nook, or corner, or angle, at a pool, or
gulf, or deep water.

Dalry means the King's district, or division, or territory. We have a great many of those *Dal's*, such as Dalswinton, Dalmellington, &c., and *dal* properly signifies posterity, or descent by blood, but in an enlarged and figurative sense it signifies a district, *i.e.*, the division or part allotted to such posterity, and thus General Vallancey and other antiquarian scholars define it ; but it means also an assembly, a plain, a field, &c., but all these other meanings are coincident with the general meaning, as they all imply ownership, or clanship of some sort or other.

Carn Sallach is a complete misnomer, it means a heap of dirt or a dirty heap, but it is not that, and never was ; however we have frequently heard it called *Garan Salach* by the country people, and that is its proper name. It is derived from *garan*, a thicket or underwood ; or from *garran*, a grove or wood ; and from *saileach* (pronounced *Salach*), common willow, mountain osier, *salix caprea*.

* It is not the *hill* that is little, but the *Dun* or fort that is placed on it—“*een*” is a mark of diminution.

The river *Nith* which runs by our doors may not be omitted, the word *Nith* means noble. I happened to say so one day to a gentleman (a member of this Society) whom I met on the banks of the river, the tide was in, and the river looked beautiful. "This," said I, "is a fine river, it well deserves its name just now, for *Nith* means noble." "O! no," said he, "it was called the *Nid* formerly, Chalmers says that it got the name of *nid* from a Scandinavian word which means crooked, and that, in fact, there are several rivers in Denmark that are called *Nid*, and they are all crooked, and this river is crooked, and the name is suitable."

This, of course, would be overwhelming only for the trifling fact that there is no river in the whole world that is not crooked, and another trifling fact is this, that this language, whether it be *Nid* or *Nith*, is, or was, my mother tongue, and that Chalmers knew nothing at all about it—he, like many other eminent men, had to depend in such cases upon what had been told him by literate or illiterate natives, and we shall see presently, as in the case of our own Lochmaben, (and other places which I could name,) how much "natives" are to be depended on in these matters.

Nith, then, means noble, it is a noble river now, as compared with other rivers in the neighbourhood, and no doubt it was a far nobler river then, when it was not confined to its present channel by artificial means as it is now, but, the term "crooked" would not be applied to it, nor to any other river whatever, by those ancient people, for the term "crooked" could be predicated of *any* river, and of *every* river, and those people took care always to have both sense and meaning in the names which they gave to things,—at all events, *Nith* means noble, and *Nid* is merely the *genitive* of *Neid*, a nest.

Lochmaben may be taken as another instance of those curious guesses with which we are favoured some times in the endeavour to explain the original meaning of the names of places, &c.

You are aware that an excellent history of Lochmaben

has been written by a gentleman who had the advantage of combining a thorough knowledge of the locality with those scholarly abilities which enabled him to produce a useful and edifying local history, and when *we* visited Lochmaben some two or three years ago, we had the good fortune of being conducted by the gentleman to whom I allude, and to whose intelligence and kindness we are greatly indebted for the very pleasant, and, I hope, profitable day which we spent among the old historic objects of that fine old country—I mean the Rev. Wm. Graham. I asked him about the derivation of “Lochmaben,” and he told me at once that when he was writing his history, and not knowing the Gaelic language, he went off to Edinburgh, to consult with a gentleman who was reputed to be the best Gaelic scholar in Edinburgh, and that gentleman told him that *ban* was *white*.

Now, in the first place, *ban* is not white, but *ban* is a woman, and *bān*, (pronounced *bawn*,) is white ; for instance, if you say *ban, ban*, it means woman, woman ; but if you say *ban, bān*, it means white woman, &c., &c. ; but, even, if *ban* was white, what has that to do with Lochmaben ? Well, it seems it has this to do with it, viz., that a white mist or fog hangs over the Loch sometimes, and hence the conclusion that Lochmaben means a Loch with a white mist or fog hanging over it !

Of course, after *that*, it is hardly worth while asking what becomes of the word *mā* in the centre of “Loch-ma-ben ?” There is not in the whole language perhaps a word more expressive or more full of meaning than that little word *mā*, and yet, here it is lost in the white fog of Lochmaben. So that we need not go to Scandinavia for “derivations” when we can get them so near home.

I find that there are several places dedicated by those original inhabitants to their gods and goddesses, and to their warriors, and that there were a great many places consecrated to their religious ceremonies, and sacrificial rites, and so on, but, for me to enter into an explanation of these things

now, would be to draw me into historical matters which I think it unnecessary to trouble you with, although the subject is very tempting, for, in fact, the whole of this interesting district is one vast repository or storehouse of those precious monuments of antiquity, which are like so many priceless jewels to the true Antiquarian, while they are of inestimable value to the student of ancient history.

The meaning of the term "Lochmaben" is this:—A Loch or Lake of clean pure good water at the foot of a ridge or at the base of a hill.

Those people always named things by contrast or comparison with other things of a cognate kind, or by some striking peculiarity in the shape or form, such as "coomb craig" (crooked rock), to distinguish it by its "crooked" shape from all other rocks or craigs in the same locality.

I have now explained, as faithfully as I can, several of the terms or names of places and things in the neighbourhood, and I hope I have not detained you too long.

NOTICE OF THE SCOTTISH SERVICE BOOK OF 1637. By
JAS. STARKE, F.S.A. Scot.

At a late meeting of the Society, some old books of value were kindly exhibited by the Rev. Thos. Underwood, Minister of Irongray, and the Rev. Mr Weir of Greyfriars.

The business of the evening prevented their being examined on that occasion; but I took them with me, and I find that among them are two books of Common Prayer of great interest—one for the Church of England 1549, and the other for the use of the Church of Scotland 1637.

This last is what was termed *Laud's Liturgy*, and is of especial interest.

The title of the volume is "The Booke of Common Prayer and Administration of the Sacraments and other parts of Divine Service for the use of the Church of Scotland."

It bears to be imprinted at Edinburgh by the King's printer of date MDCXXXVII. This is the date on the first title page. But the Royal Proclamation by King Charles I. for the general use of the Prayer Book throughout Scotland is dated 20 Dec., 1636, and the "*Psalter*" which is by the King's printer at Edinburgh, and the "*Psalmes of King David*" which is printed at London by Thomas Harper, are of the same year, 1636.

It thus appears probable that the work was sometime in preparation; and the same fact is also apparent from the Royal Proclamation, in which the King states that he had "divers times recommended to the archbishops and bishops here the publishing of a publicke forme of service in the worship of God, and the same was now condescended upon."

King James 6 had already set up Episcopacy, thinking the Monarchy could not stand without Episcopacy. His son King Charles went farther and considered Episcopacy an essential in church government.

And, now, in order to put the church in proper harness, he became fanatic for a Liturgy.

At an early period of his reign the subject of a Liturgy for Scotland was agitated; and the adoption of the English Prayer Book, which appears to have been in use here, naturally suggested itself. But the Scottish prelates were averse to this.

Conceiving that the use of the English Prayer Book would operate as an acknowledgment of some superiority on the part of the hierarchy. And also, it may be, desiring an opportunity to express views respecting the presence of the Saviour at the Communion which are commonly regarded as relishing of popery.

So, out at last came the famous Service Book in the great Church of St. Giles at Edinburgh, on Sunday, 23d July, 1637.

How long the people of Scotland had been without a Liturgy in public worship seems very uncertain. Knox's

Liturgy has been referred to. But from the preface to the Service Book, and also from the preface to the Scottish Directory for public worship, we are led to believe that the only Prayer Book in use in Scotland was the English Prayer Book. In the preface to the Service Book it is said—

“Our first Reformers were of the same mind with us, as appeareth by the ordinance they made that in all the parishes of this realme, the Common Prayer should be read weekly, on Sundaies and other festivall dayes, with the Lessons of the Old and New Testament, conforme to the order of the Book of Common Prayer (meaning that of England; for it is known that divers yeares after we had no other order for common prayer.)”

The same view is presented, but in a verbose and accumulative manner, in the preface to the Scotch Directory for public worship.

“Howbeit, long and sad experience hath made it manifest, that the Liturgy used in the Church of England (notwithstanding all the pains and religious intentions of the compilers of it) hath proved an offence, not only to many of the godly at home, but also to the reformed churches abroad,” and so forth.

“Upon these, and many the like weighty considerations in reference to the whole book in general, and because of divers particulars contained in it, not from any love to novelty or intention to disparage our first Reformers,” and so forth. “We have, after earnest and frequent calling upon the name of God,” and so forth, “resolved to lay aside the former Liturgy with the many rites and ceremonies formerly used in the worship of God, and have agreed upon the following Directory for all the parts of publick worship at ordinary and extraordinary times.”

But, perhaps, *Free prayer* had latterly come into use.

So, when this, which was termed Laud's Liturgy, came to be read it was at once identified with Romanism—various reports of its tendency that way being circulated—and the cry raised was, Will ye say mass in my lug?

Confusion and disorder ensued, and when after the lapse of some months it became evident that the King was obdurate and persistent, a *National Covenant* was adopted with great popular enthusiasm, binding all that signed it to spare nothing to save their religion. Obduracy induced obduracy, till at length after a weary struggle of 50 years duration, in which the Covenanters suffered most grievously in privations, imprisonment, and death, their principles were at last acknowledged in the Revolution Settlement of 1688—when the royal supremacy was withdrawn, and this being so, Christ's Kingly Crown and Government, for which the Covenanters contended, were in a manner set up.

And the General Assembly of the Church of Scotland is convened and dissolved in the name of Jesus Christ, the King and Head of the Church.

This is done by the Moderator, who is appointed by the Assembly itself, and after him the Lord High Commissioner, representative of the Sovereign, does the like in the name of the Sovereign, both in this way harmoniously agreeing together as to the time of meeting, and thus also discriminating the Church of Scotland in its relation to the Civil Magistrate, from the Anglican Church and from the Free Church of Scotland and the Church of Rome.

The genius of Presbytery was too severe and stern to ask the aid of martial music to lead her companies, and her occupations were too urgent to dally with musical ditties. Her mind was that of the prophet Nehemiah to Sanballid and the rest of them—*I am doing a great work, so that I cannot come down.*

Yet there is a legendary piece, under the name of *General Leslie's March to Marston Moor*, which, whether genuine or not, describes well the feelings of the covenanting armies at that period.

With respect to the merits of the *Service Book*, any minute examination of it would be out of place here, as savouring more of the theologian than the antiquary. But a few general remarks may be allowed.

Chambers, in his Domestic Annals of Scotland, describes it as "prepared by Laud on the basis of that commonly used in England, but with a few innovations relishing of popery and Arminianism."

The popish tendency here referred to will be at once perceived in the passages introduced into the *consecration prayer* at the communion.

There is also a general exaltation of the clergy, as in the prayer for clergy and people which is entitled a "Prayer for the holy clergie."

On the other hand, the Scottish people had, no doubt, to be conciliated. So the *priest* is writ large, and becomes "*Presbyter*," and it is the "*Presbyter*" who reads the commandments and pronounces the Absolution.

And the altar always appears simply as the Holy Table and such like; though it be covered with a carpet, and fair white linen cloth, with other decent furniture, "fit for the high mysteries there to be celebrated."

The Book is of great interest and value in a theological as well as historical and antiquarian point of view.

It is in *black letter*, beautifully printed, and generally it is in good order. But the binding is sadly gone by neglect, and the volume is eminently worthy of being put in good condition and preserved with care: such as to shew how worthy they are of the gift bestowed.

Before concluding, I would here offer on behalf of the Society our acknowledgments and thanks to Mr Underwood and other members of Presbytery for their so kindly giving us this opportunity of handling and examining this interesting volume.

HISTORY OF A CRICHTON BOULDER. By J. GILCHRIST, M.D.,
Medical Superintendent, Crichton Royal Institution.

The brief notes of this paper refer to a large stone which is now lying to the N.E. of the female airing court, Southern Counties Asylum, and which is denominated in geological language a Boulder. A Boulder is a fragment of rock, smaller or larger, as the case may be, from the size of the head to that of a house. It exhibits at least two, not unfrequently three characteristics :

1. It is rounded.
2. It is polished.
3. It is often striated.

These characteristics serve to distinguish a Boulder from other varieties of rock.

The first characteristic indicates that since the fragment was detached from its parent mass it had been subjected to the action of some influence which had modified its appearance, rubbed off its angles and rounded its form. Its polished condition indicates a greatly prolonged action either of the same or some other power. The third—the striæ—indicate the action of a peculiar agent very different from that which produced the first or second characteristics. The agent engaged in the production of these results is obviously enough Water—as the waves of the sea, the currents of a river, &c.—either in its ordinary form as *water* or in its extraordinary form as *ice*.

The striæ on a true boulder are always in straight lines, indicating necessarily the action of a solid body in a given direction. Such action, therefore, obviously can never be attributed to water or to water and ice, for the action of these agents, single or combined, is to *obliterate*, not to *produce* such lines. In short, the only agents in nature known to be capable of producing such results are

A Glacier or an Iceberg.

The former, as every traveller or even reader knows, is a river of ice solid yet plastic—constantly in motion grinding down and polishing the rocks in its banks and channel, and in certain circumstances producing the striæ referred to. The Iceberg is adequate to the production of the same results with its million horse power grinding and grooving the rocks at the bottom of the ocean. In possession of this preliminary information, let us now examine the “Crichton Boulder” and hear what it has to say for itself.

This Boulder was recently disinterred from its resting place of boulder-clay near to the S. C. Asylum. It lay about six feet below the original surface and had probably not been disturbed since its interment, *a very long time ago*. It is a mass of rock, which may be described as a rounded cuboid in form with a diameter of about three feet. If we examine it we find that it is rounded in its outline, its angles and corners having been rubbed away, and so it has the first characteristic of a Boulder.

If we examine it yet more closely we find that it is not only rounded but smoothed, planed, polished over its entire surface, and so it possesses the second characteristic of a Boulder.

In like manner we shall find that, especially on one of its surfaces, it presents a parallel series of narrow shallow grooves or striæ, as they are technically termed, and so it presents the third characteristic of a Boulder.

If we use our eyes aright, however, we shall, I apprehend, detect other important and significant indications. One of the indications referred to is presented by a hollow or depression on the surface of one of its sides. When we narrowly examine this depression we find it polished equally with the more prominent parts of the surface. This leads us to an important warrantable inference. A joiner's plane, for example, does not reach a depression in the surface it is applied to—other means have to be used—so in nature, for the law is equally applicable to a mountain as to a mole. This might be accomplished by sand, for example, with the

aid of water ; but it is more likely to be the result of glacier action.

The glacier is not only a solid but a plastic body, and when, in its slow but continuous and resistless motion, it passes over an opposing obstacle it not only wears away its prominent parts but applies itself equally to the depressions which it presents. Again if we consider the relation which subsists between the striæ referred to and the polished surface in which they occur we are furnished with another important item of information, viz., that the former were produced *subsequently* to the latter. If the striæ had been produced before the polishing action began, or even during its progress, it is manifest that during that process they would have been obliterated. It is noteworthy that the striæ are confined to *one* side, just what might have been anticipated if produced by an iceberg. To allow of its submitting steadily to the application of so great a force as is implied in the formation of these striæ it must obviously have been firmly imbedded in the underlying substratum. It is at least *unlikely* that it should have been subsequently raised from its bed and submitted to a second similar process. Indeed it is obvious that these striæ were inflicted by the tooth of old Father Time in the last stage of the Boulder's existence, just before it was interred in the grave, whence we have so recently dug it. We have not yet, however, exhausted the sources of our information. We have as yet only examined the external features of our friend's character.

Let us see if we may not learn something of the inner life. On examining the internal structure of the rock we ascertain without much difficulty that it is *silurian* in character. This, however, supplies us at once with an important item of knowledge, for we know that the nearest silurian rock is to be found in the Tinwald Hills on the one hand, or in the Galloway hills on the other, and the enquiry is immediately forced upon us—How came it here? If we examine its contemporaries perhaps we shall be able to elicit some items of knowledge. These we find to consist of silt,

sand, shingle, and similar materials. These we know to be the products of water in some or all of its modifications referred to at the outset of the paper. As a boulder, equally with a man, may be known by the company it keeps, we can have no difficulty in deciding that its condition and position are due to the same causes, viz., the action of water. We have now completed what may be called the introduction, and are prepared to enter upon the consideration of the subject itself, viz., the History of a Crichton Boulder.

This, however, would require a minute and searching enquiry into the birth, life, death, and burial of the subject of our enquiry—its history in short from the moment at which it was detached from its parent rock, in the distant mountains, till it was deposited far from its original home in its present resting place. I need hardly say that neither your time nor mine allows of this ; at present at least.

Let me in a few words indicate what I believe to be its real history, hoping to be able on some other occasion to bring it before you at greater length. This boulder was, during the glacier epoch, when this part of the country was in the same condition as Greenland now is, detached from its parent rock far up in the mountains to the north by the action of frost ; thence it was precipitated to the glacier below, which slowly carried it to the distant ocean, then some hundreds of feet higher than it now is. There for ages it was subjected to the action of the waves, which rounded and polished it. Thus fitted for the building of the Great Architect—for he has a purpose in everything—it was firmly imbedded in the shore ice during winter. Then released from its bonds by the summer sun, it was carried off from the shore and deposited in its present position on the side of the valley then submerged. Subsequently an iceberg, detached from the ever-moving ice-river, swept along in its southern course, and, with a mass of harder rock fixed in its body, ground its surface as it passed over it, leaving those striæ to tell future ages of its previous conditions. It has now fulfilled its destiny, and kind nature covers it up in a grave of mud

and sand, whence we have just disinterred it, and glanced curiously at its strange features, and given only a few passing hints at its stranger history.

A PRACTICAL HINT.

To obtain an adequate knowledge of that interesting and remote though still obscure epoch of our earth's history—the glacier epoch—it is not necessary to visit Greenland or Iceland or even the Alpine glaciers. If a man has his eyes in his head—the characteristic of a wise man according to Solomon—he may see proofs of glacier action on the sides and bottom of almost every valley in Scotland, and if these should fail to convince him of the positive existence of such ancient agents, he has only to visit the “Crichton Boulder.”

MINERALS LATELY FOUND IN DUMFRIESSHIRE AND GALLO- WAY, NOT HITHERTO NOTICED AS OCCURRING IN THE LOCALITIES.

DUMFRIESSHIRE.

At the junction of the Esk and Liddle, in Red Sand Stone.

Fibrous Gypsum—

Glendinning, Eskdalemuir, at an Antimony Mine recently re-opened — *Cervantite*, *Valentinite*, (psedumorph) *Cervantite* after *Valentinite*.

STEWARTRY OF KIRKCUDBRIGHT.

Creetown—*Granite Quarry*—*Epidote*.

Fibble Mine—*Malachite*, green and blue, *Towanite*, *Pitchy Copper Ore*, *Chrysocolla*, *Galena*, *Anglesite*, *Cerussite*, *Pyromorphite*, *Wulfenite*, *Blende*, *Smithsonite*, blue.

Creetown—*Cassencary*—*Kupfer Nickel*, *Nickel ochre*, *Emerald Nickel* (?) *Cobalt bloom*, *Native Arsenic*, *Galena*, *Towanite*, *Blende*.

Gatehouse—Lackentyre Mine—Malachite, Towanite, Pitchy Copper Ore, Chrysocolla, Galena, Anglesite, Cerussite, Pyromorphite, Wulfenite, Vanadinite, (?) Blende.

Auchencairn—Balcarry Mine—Sulphate of Barytes, Towanite, Malachite, fibrous, Tetrahedrite.

NOTE OF RARE BIRDS THAT HAVE OCCURRED IN DUMFRIES- SHIRE AND GALLOWAY DURING THE PAST YEAR.

Two specimens of Capercailzie were shot, the one at Auchencairn, the other near Newton-Stewart—they were both females and most probably had strayed from Ayrshire.

Hoopoe (upupa epops). A specimen was shot near Hitae, in the parish of Lochmaben; another specimen was shot by Mr M'Quae, gamekeeper at Munches, near that place.

Turtle Dove (Turtur auritus) was shot at Lochrutton gate, Dumfriesshire, in June 1870. This bird comes very rarely into Scotland. A specimen was shot in the garden at Jardine-hall in 1814 or 1815, and it has occurred as far north as Aberdeenshire.

The black or white spotted Woodpecker (*picus*) has been shot several times, both at Munches Kirkcudbrightshire, and at Kinmeunt Dumfriesshire, within the last two years.

NOTES ON BIRDS AND THEIR HABITS, AS OBSERVED AT ASHBANK, MAXWELLTOWN. By T. CORRIE.

As was said by Mr Aird in the introduction to his pleasant paper recorded in our Transactions published in 1866, "I am not a naturalist in the usual sense of the term," but, like him, I take a warm interest in the living things by

which we are surrounded, and in the hope that they may not only be interesting but useful to the Society, I have strung together a few facts relating to "Birds and their Habits," the result of my observation, within the narrow limits of my own garden, and the immediate neighbourhood. The garden, though only about half an acre in extent, is fairly provided with trees, shrubs, hedgerows, and banks, is surrounded by grounds with equally favourable accommodation for our feathered friends, and has the Nith close upon its Eastern boundary. Besides these attractions, I possess what is I believe the greatest of all to the birds in the shape of a small fountain, in whose waters many of them bathe themselves almost daily throughout the year.

These circumstances may account for the considerable variety of birds (upwards of 40) in the subjoined list, in which I have followed the classification of Bewick, all of which I have observed at Ashbank or close by:—

- | | |
|-------------------------------|--|
| 1. Sparrowhawk. | 22. Spotted Fly Catcher. |
| 2. Kestrel. | 23. Redbreast. |
| 3. Merlin. | 24. Hedge Sparrow. |
| 4. Rook. | 25. Whitethroat. |
| 5. Jackdaw. | 26. Willow Wren. |
| 6. Starling. | 27. Least Do. |
| 7. Blackbird. | 28. Common Wren. |
| 8. Missel Thrush. | 29/32. Greater, Blue, Cole,
and Longtailed Tits. |
| 9. Song Thrush. | 33/36. Common Swallow, Sand
Martin, Martin and
Swift. |
| 10. Cuckoo. | 37. Partridge. |
| 11. Tree Creeper. | 38. Water Ouzel. |
| 12. Greenfinch. | 39. Heron. |
| 13. Common Bunting. | 40. Common Sandpiper. |
| 14. Yellow Bunting or 'Yoit.' | 41. Water Hen. |
| 15. House Sparrow. | 42/44. Common Gull, Black-
headed Gull, and Les-
ser Blackbacked Gull. |
| 16. Chaffinch. | |
| 17. Redpole or Red Linnet. | |
| 18. Skylark. | |
| 19. Tree Lark. | |
| 20. Pied Wagtail. | |
| 21. Grey Do. | |

Of these birds, Nos. 6, 7, 8, 9, 12, 13, 14, 15, 16, 19, 22, 23, 24, 25, 26, 27, 28, 29, 30, have all, once or oftener, had nests within the boundaries of my garden, while Nos. 20 and 21 breed in the immediate neighbourhood. Many of them are but chance visitors, giving little opportunity for observation, and I shall, therefore, in the following remarks, as the title of my paper bears, confine myself to recording what I have actually seen.

The *Kestrel* is a frequent visitor, evidently for the purpose of preying on the Common Sparrows, which congregate on a large thorn near the front of the house. On one occasion a fine female bird, when "trying it on" for a sparrow, missed her mark, and dashed against the plate glass of the window, which, being luckily the stronger of the two, stunned the intruder, who was lifted in the hand, carried into the house, and on recovery was restored to liberty. This did not appear to have frightened the hawk, for not long after I saw what I believed to be the same bird strike a sparrow, and coolly sit down upon the grass at the foot of the thorn to tear it in pieces. The only visit of the *Sparrow Hawk* I know of occurred exactly a fortnight ago, when a fine male bird "came to grief" against the windows, precisely as the kestrel did, recovered, and was also liberated. When about to set him free, and while holding him firm with one hand, I could not help admiring his bold and defiant bearing even when a captive, and the cleverness with which he struck with his talons at my other hand whenever I put it near enough for him to hit me. The *Merlin* I can scarcely say I have observed. I have only *seen* it—my attention being drawn to it when high in air, pursued by some small birds, where it appeared like an extra large Swift; and on one or two other occasions, when flying low, he passed me like a thought.

The *Jackdaw* I have noticed, when building his nest in spring, is knowing enough to prey upon the brittle branches of the ash, and he seems to exercise a considerable nicety in his choice of sticks, for I have often seen him break off and

drop several before getting one to his mind. The result of this is that at times the green beneath two large and rather old ash trees in my garden is strewn with sticks. I notice that the most of my branches are carried to the chimneys of the building where we are at present sitting.

The *Starling* breeds freely in boxes fixed pretty high upon my trees. He is a very active fellow, but as, unless when building his nest or bringing up his young, he is little seen, I do not look upon him as a great attraction. He is very suspicious and watchful, ever on the alert, and thus not easily seen near in his natural manner. I have thought these birds appeared in their best when I have watched perhaps 6 or 8 of them, from my bedroom window, running about the green feeding in the early morning, the sun shining upon their changing colours and bringing out all their beauties.

The *Blackbird*, *Song Thrush*, and *Missel Thrush* breed regularly with us. The habits of these birds are well known, but I may just mention what I believe is somewhat rare, that I know of one instance where a *Blackbird* having been "harried," the old nest was re-lined, eggs again laid, and a brood hatched. Last year a poor "Blackie," having built among some pea sticks, was harried by a cat; the pair then tried some black currant bushes, grown Espalier fashion, but cruel fate still followed them, for "when the wind blew, the cradle it rocked," and down came the small "clay biggin" with the callow young inside of it. Not to be beat, however, another attempt was made, and on this occasion, I am glad to say, it was successful, for they chose the fork of a tree some fifteen feet from the ground—rather an unusual locality—and there brought up their brood in safety. I have noticed in some seasons a much larger number of blackbirds than usual, and on one occasion I counted no fewer than 24 running about the green in front. The *Song Thrush* is not numerous, but we have always at least one cock bird to sing delightfully from the topmost branches of the highest tree; and it may

be mentioned, as showing the openness of the season, that we have had the song of the thrush almost every day since before Christmas, and just now (2d February, 1869) he may be heard in full song every morning. The *Missel Thrush* scarcely ever leaves us, and this winter has not done so; but has frequented the garden daily, feeding on "haws," of which there was a plentiful crop last year. In hard weather, when the supply of haws got exhausted, I have noticed that the *Missel* fed freely upon the berries of the "Cottoneaster" shrub growing against the wall of my house—a food also, indeed, freely partaken of by most of our common birds, even "Robins." When so feeding, the *Missel* becomes very bold, and will sit on a small railing within a few feet of the window, with two or three persons watching him, and admiring his beautifully speckled breast. He is too, in such circumstances, selfishly tyrannical, and drives off every other hungry bird who wishes to partake of the dainties before him. In building his nest—it is usually in the same cleft of a particular tree—he, in 1867, took the liberty of "appropriating to his own uses and purposes" a piece of lace which had been laid out to bleach, and had it all neatly woven into the fabric of his house except one end, which he evidently had left loose to flaunt in the breeze and spite the owner. When attending to his young he is very wary, and will sit long enough if he thinks he is watched before dropping to the nest. If the nest is approached he makes noise enough to frighten away almost any intruder but man.

The *House Sparrow*, so well known, I look upon with interest as a very clever, bold, and possibly impudent little fellow. It is instructive and amusing to watch the care and solicitude he expends upon his young. One old cock, in one season, who had a family of no less than five, became very tame, and having them all in a row, perhaps five or six feet from me, he would approach within a foot to pick up crumbs thrown to him, and then distribute the food in the most regular, systematic, and paternal manner to his chirping and

wing-shaking progeny. Wishing to prevent too great an increase of them I on one occasion, seeing a pair busy building in a hole of a wall, stopped the opening with a loose stone. About a week after I noticed the cock fly to that hole repeatedly as if seeking an entrance, but on closely watching him I discovered to my horror that I had imprisoned the hen bird, and that he was feeding her through a narrow opening, having evidently done so all the time of her imprisonment. It is needless to say that I at once gave the poor bird her freedom, and saw her join her faithful mate apparently none the worse of her solitary confinement for so long a period.

Of the *Chaffinch* I have little to say, except that it breeds yearly with us, there being generally two nests within the limits of the garden. Some three years ago I noticed that a pair who had been prevented from bringing up their young by the accidental destruction of their nest on two occasions, at length fixed it on the top of a stout stake, forming part of the *Espalier* on which the black currants before mentioned are grown, and each year since the nest has been similarly placed. The choice of locality is certainly an uncommon one with the *Chaffinch*, and may lead to the inference that the bird is possessed of a considerable degree of reasoning power. Both male and female become pretty familiar, but I have never been able to make one so pet as was Mr Aird's "Jenny."

The *Pied* and *Grey Wagtails* frequent the fountain principally in the autumn, and by four or five at a time. They—"the smallest bird that walks"—are most interesting and graceful. The *Pied Wagtail* two years ago bred in one of the gargoyles or spouts of the Old Bridge, and more than once I had to scare away a ragged urchin making vigorous but happily unsuccessful efforts to reach the young birds, while the parents sat literally trembling for their safety upon the Telegraphic wire near by. The *Grey Wagtail* breeds in holes of the wall bounding the tail race of the Dumfries Mills. In connection with these birds' familiar name of Water Wag-

tails, it is curious to note that the first Wagtail's nest I ever knew was several hundred yards from any water, in a dyke on a public road side.

The *Spotted Flycatcher* breeds yearly in a small hole in an Ash tree. It arrives about the 25th of May, and departs in September. It is most interesting to watch it at the occupation its name imparts, choosing generally two stations, and flying backwards and forwards with a sort of downwards semi-circular sweep, catching its insect prey and then perching again. Its three or four young may be frequently seen sitting in a row and being fed in rotation by the parent birds. The larger kind of midge-flies seem to be its favourite food.

Robin Redbreast we have literally "all the year round," shy and wild and cunning in the breeding season, but cheering us in autumn and winter with his clear beautiful song, and interesting us by his bold defiant manner. In hard winters we have usually one bird for the front door and another for the kitchen; both equally familiar, but both insisting most determinedly on exclusive possession of their respective premises. The winter season of 1868-9 has not been favourable to a display of Bob's pugnacity, there not yet at least having been any scarcity of food.

The *Greater* and *Blue Tits* live constantly with us, and are tolerably familiar, especially since I have hung up a piece of fat or a common tallow candle, of which they are very fond. This enables them, while holding on by their feet and perching, to throw themselves into the most graceful attitudes. I notice that it is in the early morning and at dusk they come to feed on the tallow. The *Cole Tit* I have never seen except by a single pair at a time, flitting in and out of a hedge very much after the manner of the Common Wren. The *Longtailed Tit* I have frequently seen in considerable flocks—as many as 30—passing rapidly along from tree to tree.

The *Water Ouzel*. This bird, frequently a pair of them,

frequents the Nith between the Cauld and the head of the Dock, and I have there frequently heard its low but rather sweet song while seated on a stone in the river. It is absent during the summer, apparently while rearing its young, but in autumn and all through winter and spring when the river is in its normal state it is seldom to be missed. During this winter when the river has been in a chronic state of flood I have rarely seen them. I believe this is caused by their inability to reach their food in the deep water. There are two points in regard to this bird that have often been disputed, viz., the nature of its food, and its ability to seek it under water. It has been blamed for destroying salmon spawn, and so, among the fish and game preserving community, has been classed as "Vermin." In regard to the first point I am inclined to believe that it is not a systematic eater of salmon spawn, and for this reason, that the spawn is usually deposited where there is at least enough of water to more than cover the fish, while I have never yet, and I have often carefully watched the birds, seen them seeking their food in water deeper than would cover their own backs. Their favourite feeding place seems to me to be on the slope of the Cauld and in the tail-race of the mill, in both of which places a weed grows which shelters underneath it, in great numbers, an insect known as the Fresh Water Shrimp. This insect, from what I have observed, in my opinion forms a great part of the food of the Water Ouzel. On the second point—its ability to walk *under* water—I am of opinion that in this, as in most other matters, the middle course is the true one. It does, and yet it does not, for while I have never seen it under water so deep as entirely to cover it from view, I have very often seen it seeking its food with its head under water, but that water not so deep as completely to cover its body. Nothing is more common than to see the bird pass from one spot to another with its quick jerking flight, alight in the shallow water of the river side, and instantly commence its search for food, partially covered as I have described.

I have mentioned the fact of a cock Sparrow feeding his young all in a row, and this recalls to me that I have received the impression from what I have seen of all the birds breeding around us, that though the hen bird has the principal share in bringing them to life, the cock appears to take the principal charge afterwards. I have noticed this beyond doubt in the case of semi-domesticated pigeons—such as Fan-tails.

I have also mentioned the Fountain as a great attraction to birds. It undoubtedly is so, for almost all who visit or stay with us avail themselves of the opportunity thus afforded them, and bathe frequently, and evidently with the greatest delight, and this more in winter than in summer. I cannot say, however, that I ever saw Wagtails do so. The Robin, in particular, is scarcely ever seen to bathe in summer, while in winter it is his regular habit—no matter how hard the weather nor how wet—to take his bath just at dusk when he can scarcely be noticed, and then preen his feathers before seeking his place of rest.

In connection with, and as a tail-piece to the foregoing notes, I lay upon the table for inspection a copy of "Bewick's British Birds," and of Mrs Hugh Blackburn's "Birds drawn from Nature."

NOTE.—In addition to the Birds above enumerated, the Goldfinch and Golden-crested Wren were seen and noted soon after this paper was read.

NOTES ON LEPIDOPTERA.

By WM. LENNON.

THE general term *Insect* has been given to the whole tribe of creatures embracing moths, bees, beetles, house flies, dragon-flies, and many others, in consequence of the

leading peculiarity which characterises all the orders, namely, the deep *insection* which occurs between the fore part of the body, or thorax, and the hinder part, or abdomen. Perhaps one of the most conspicuous examples may be found in the common wasp, where the *insection* is so conspicuously prominent; more so, perhaps, than in any other order of insects. The fine distinct order of insects containing the moths and the butterflies are known everywhere as the order *Lepidoptera*. This very descriptive title has been conferred on the whole tribe of the Lepidoptera in consequence of the minute scales with which their wings are all covered. It is to these scales they are indebted for all their beautiful colours and markings. When the scales are off the membrane of the wings is perfectly smooth and transparent. The Lepidoptera was divided by Linnæus into three great sections: first, the *Diurna*, being all those which fly by day, which comprises all the butterflies; secondly, the *Nocturna*, or those which fly by night, which includes a large portion of the moths; thirdly, the *Crepuscularia*, which was intended to comprise such as generally fly by evening, twilight, or early dawn of morning. But this third division of *Crepuscularia* was soon found to be unworkable, and the time of flight, as a general rule, was not a good basis of classification. The more modern system of entomological classification is much more correct, which comprises only two grand divisions, founded on the only true basis of classification, namely, anatomical distinctions. The first division embraces all those having a small club-like enlargement at the ends of the *antennæ*, which comprises all the butterflies. In the moths the *antennæ* are sometimes smooth, sometimes feathered, sometimes robust, sometimes long and slender. The *antennæ* of the males very frequently differ from those of the females, but they are never clubbed like the butterflies—the great family of the *Geometridæ*, which is composed of a group of insects that are in many respects very distinct from the great family of the *Noctuidæ*. Nearly all the

species have the bodies comparatively slender, and small in proportion to the wings, which are much larger than those of the *Noctuidæ*, though not so strong in texture or so robustly veined. Another peculiarity which distinguishes them from the *Noctuidæ* is that, when in repose (with the exception of a very few that hold their wings erect), like all the butterflies, the wings are horizontally extended, which shows the upper surface of both pairs, while in the *Noctuidæ* the fore wings are wrapped over the hinder pair, which they entirely conceal. It is more in the *larva* state that this order presents the most striking peculiarities. The caterpillars have only one pair of ventral pro-legs, and that pair the hindermost. This peculiar formation necessitates a curious action in their mode of progression, which is effected by first fixing their six pectoral feet firmly to the substance on which they are standing, and then drawing close up to them the two posterior pairs of feet. When in this position, the intermediate or central segments of the body being raised into a kind of loop, from which they are commonly known by the name of loopers, the hind feet are then held firmly fixed while the body is again fully extended, when the hind feet are again brought up close to them as before, raising the intermediate segments into the loop form as before described. The repetition of this movement gives these singular-looking caterpillars the appearance as if they were carefully measuring the earth, or any other substance over which they may be travelling. It is from this strange mode of walking that they are named *Geometræ*. They have no legs under the middle part of the body, which necessitates this peculiar mode of progression. Some few of the species have additional pairs of ventral legs, but in almost every case they are very minute; indeed, I may say, altogether rudimental. I have very frequently been astonished at the great muscular power of some of the *Geometræ larva*. They can rest entirely on their two pair of hind legs for hours together, with the whole length of the body extended forward in a slanting position. When they are thus resting, some of the

species so closely resemble a dead branch or twig of tree on which they may be resting that none but a practical entomologist could observe them, so closely do they resemble a dry branch. Again, the pupa or chrysalides of the *Geometræ* are rarely subterranean, while the greatest number of the *Noctuinae* go into the earth before assuming the pupa state. The pupa of the *Geometræ* are more frequently found among dead leaves, sometimes in a loose cocoon, and sometimes suspended by the tail like the butterflies. The British *Geometræ* number about two hundred and sixty species, while the *Noctuinae* will number about three hundred species. The most remarkable order among all the *Lepidoptera* are unquestionably the *Sphinginae*. None attract more attention. Their large size, rapid movement, and the splendour of all the species very properly constitute them to represent the first order among the moths. They belong to the first subdivision of the great section *Heterocera*. They are all easily distinguished by the short stout body of the perfect insect. The family of the *Sphingidae* contains several genera, the first genus being *Smerinthus*. All the caterpillars of this genus are green, and invariably covered with small tubercles closely arranged in regular rows. The sides are marked with a series of streaks of a paler green than the rest of the body. The most remarkable species of this fine division is no doubt the well-known death's-head moth, *Acherontia atropos*: the robust body and the wings straight at the external margin, the short *antennæ* and the shorter proboscis, scarcely longer than the head, are quite sufficient to mark this species as very distinct from the other hawk moths. The caterpillar is also very distinct in form from all the other species. The dorsal horn or tail is decumbent instead of being raised, and the body is jagged with small excrescences instead of being smooth, and is entirely without the minute tubercles which so much distinguish the caterpillars of the genus *Smerinthus*. Some seasons the death's-head moth is unusually common in the caterpillar state. Many attempts are made to obtain the perfect insect

on these occasions by keeping the caterpillar, but they generally all perish from the want of proper knowledge how to keep them. One of the finest and most typical of all the hawk moths is that highly characteristic species the *Sphinx convolvuli*. It is a very handsome species, and is much more rare than the death's-head. The fore wings are ashy grey, and most beautifully clouded with brown; the abdomen is also beautifully barred with black, white, and deep pink. When on the wing the *convolvulis* is the swiftest of all the moth tribe. The rapidity of its movements is so marvellous and so rapid that it is a very difficult matter to give a good description of it. However, Mr Douglas, in the World of Insects, has given such a good description of this species on the wing that I will give it in full, as it is so much better than anything that I could give. Douglas says—"Did you ever see a *Sphinx* fly? There is nothing to compare its motion to except a flash of lightning. While you are looking at a flower in the twilight, between you and it glides a motion, a moving haziness, which is before you, and yet conveys to your eye no definite image. Before you have half thought what it can be, you see the flower again distinctly, and rub your eyes, thinking that there must have been an illusion, or possibly an unsteadiness of vision caused by the irritation of the gnat that was buzzing about your head, when lo! the flower just beyond seems to shiver; you move to see what is there, but there is a move before you, and a dim shadow flits away like a thought. Can it be anything real? Stand still awhile; and now, in the increasing gloom, as you bend over the *petunias* holding your breath, you see a darkness visible drop down before, but its presence is better made known by the humming sound caused by the rapid vibration of the wings. Stir not, or this aerial body will float away. Now you see it deigns not to alight or touch the margin of the chalice, but, poising itself in air, stretches out its long tubular tongue and quaffs the nectar at the bottom. Now or never, if you wish to catch it. Strike with your ring rapidly below the flower, raising your

hand and turning your wrist at the same moment. All collectors will know what I mean. There you have it, *Sphinx convolvuli*. Look, what a living glory ; its eyes like stars brought down for us to look into, and behold, we see nothing but light."

This very descriptive picture by Mr Douglas is not by any means overdrawn, as everyone will admit who has ever seen the perfect insect alive. I recollect the first specimen of the *convolvuli* that I had ever seen was one that was found at rest in the Castledykes garden by a little boy some years ago. I kept it alive till the evening, for the purpose of seeing its eyes by night, which I had heard so much about. Stainton says that hawk moths are the comets of the insect collector, which is no doubt true ; and probably many an old entomologist looks back to the time when he took his first *Sphinx convolvuli*, the death's-head, *Acherontia atropos*, the Humming Bird-moth, *Macroglossa stellatarum*, or the Elephant Hawk-moth, *Chaerocampa elpenor*, as an event in their time worth remembering. Such an event as the capture of all these does not often fall to the lot of one collector. That large class of insects which the butterflies and the moths belong to are perhaps more commonly known than any other order of insects. This may be partly accounted for by the dazzling beauty of many of the species, more especially the diurnal order of *Lepidoptera*, which are more or less familiar to all. It is quite impossible for any one to take a walk on a fine summer day without seeing several species of butterflies gambolling about from flower to flower—light-winged and graceful in every movement, arrayed in matchless beauty. Even the very commonest of our common butterflies have each a special beauty of its own which no other order of insect possesses. The combination and harmony of colours are exceedingly fine. Many species of the Coleopterous insects are clothed in much brighter colours, but they want the soft depth and the fine harmonious tone which the butterflies so eminently possess. To begin to particularise the beauty of the butterflies, one

would require to begin at the beginning, for they are all beautiful of their class. To give a true and correct description of the fair *Cynthia cardui*, or painted lady, would require some one better gifted in entomological language than I have any pretension to ; and as it is always better not to give a description at all than attempt to give one unworthy of the subject, the fair Cynthia is a highly elegant species. She is well named the Painted Lady ; in France she is styled the " Belle dame," or fine lady.

That fine genus of butterflies commonly known as the Fritillaries are all distinguished by the adornment of fine silvery spots and streaks, with which the under side of the wings is adorned, while the upper surface is chequered with black upon a ground of rich golden brown. Of all the British Fritillaries *Argynnis paphia* is, perhaps, the most lovely, from the exquisite softness and harmony of the fine silvery pencillings with which the under surface of the wings is adorned, and which gives them the appearance as if they were carefully indented with silver or pearl on the rich greenish ground of the under wings, although some of the other species are brighter, gayer, and more sparkling. In my own estimation there is no British butterfly equal to the red admiral, *Vanessa atalanta*, in grand vividness of colour. *V. atalanta* will stand in comparison with any other insect. He is certainly a most brilliant species ; and he appears also to be quite aware of his own beauty, as it comes sailing along through the sunny lanes, gracefully inclining from side to side as if he meant to show off his colours to the best advantage. He is also a very bold insect. He will sometimes light within two yards of you. When he sits on a flower beside you, opening and shutting his wings, just make a dash at him with your net, and miss him. Catch him again, if you can. I have often done this when I did not want him, just to see the very independent way he would say good bye to you. The wings of this insect are so intensely black, with brilliant scarlet bands and borders, relieved by the cool white spots at the outer and upper corners ; also by choice bits of

blue at the inner and lower angles, and near the margins. The painting of the under surface of the wings is quite beyond my power to describe them. There is, in addition to the scarlet bands, a series of fine blue spots on the upper wings. The lower are all covered with a most intricate embroidery of indescribable tints; all kinds of browns, and greys, and blacks, with metallic tints, are blended together with magic effect.

The species comes out early in August, and may be met with till late in October. It is found in all parts of Britain, as well as over Europe, and on the districts bordering the Mediterranean; it is also found in the United States of America. Parties well skilled in mythology will remember that *atalanta* was a young lady so swift of foot that she could run over the sea without splashing her ankles, or on the corn fields without bending an ear of corn under her weight. Some poetical entomologists have named it the swift-footed *atalanta*. The genus *Thecla* contains a group of very elegant butterflies. Five species are allotted to this genus, but only two are found in Scotland—*Thecla quercus* and *Thecla rubi*. *Quercus* is found at Comlongan and Dalscairth; *rubi* is found at Tinwald Downs, Dalscairth, and Jardine Hall. This group is very easily distinguished from the other butterflies by the tail-like projection on the lower edge of the hind wing. *T. rubi* has this so very slightly developed that you can scarcely observe it. They are all best distinguished by the characters on the under surface of the wings; they all bear a more or less distinct hair-like streak, which gives them the common name *Hair-streak*. *Thecla quercus* is the handsomest of the genus. The *male* has all the wings in certain lights of a dark brown colour, but by a change of position they become illuminated with a deep rich purple tint, nearly extending over the whole surface, except a very narrow border, which then appears black. The *female* has the purple much more vivid, but more confined to a *small patch*, extending only from the root to the centre of the front wings. The wings beneath are shaded with greyish

tints, and crossed by a white line on each wing. There are two orange spots on the inner corner of the hind wings. I once bred this species from *larvae* which I found in Goldielea Park, by beating the large oaks with a long pole. The caterpillar feeds on the oak. It is reddish brown, and slightly barred with black. The butterfly comes out in July and August. It is no easy matter to take it on the wing, as it invariably keeps gambolling about on the very tops of the oak trees. The only way I could take them was by throwing a handful of small stones as high as I could throw them, and in their descent they not only dislodge them, but the butterflies will actually follow the stones down, and in this way I picked them up with my net. Had I not thought of this plan I could not so easily have taken *Thecla quercus*. *T. rubi* is the next species of the genus, and is a very pretty little insect. It is easily distinguished from the other species by the rich green colour that overspreads the under surface; the wings above are a deep warm brown. The caterpillar is green, spotted and striped with white. It feeds on the bramble and broom. The butterfly comes out in May and June, and again in August, being *double* brooded. The genus *Lycæna* contains a group of very elegant butterflies. Ten species are allotted to this genus, which embraces all the blues. Only three species of the genus can be claimed as natives of Scotland, although some ambitious collectors claim four. I never met with more than three, namely, *alsus*, *alexis*, and *agestis*. *L. alsus* is the smallest of all the British butterflies. The only locality that I know for it is the sloping sides of the glen at Glen Mills. *Agestis* is distinct from *artaxerxes*. The butterfly is out in May, June, and August. *L. artaxerxes* is a very local insect indeed. I once found a pair at the Glen Mill, but only once,—Jardine Hall, Munches Hill. The best locality that I know for it is along the high range of hills west and south-west of Dalscairth House; it has also been taken at Jardine Hall. The butterfly may be found there in July and August. I may mention that the greatest rarity of the

season was a fine specimen of *Colias edusa*, which I found on Carlaverock shore last autumn, near the place which is known by the name of the Fishers' Thorn. *Colias edusa* is a richly coloured insect, and is, perhaps, one of the most nimble-winged of all the butterflies. None make up a finer show in cabinet, and none but an experienced hunter need ever attempt to take *edusa* on the wing. Should you miss your first chance, pursuit is useless; away goes *Colias edusa* like an aerial spirit, up hill or down hill, all the same to her; the pursuer is soon left far behind. The Rev. Joseph Green, in his *Insect Hunter's Companion*, gives such a good description of the chase, that I will give it in full:—"I see a strange, and at first sight an unaccountable, spectacle: it is that of a young man rushing frantically through a field of clover under a burning sun. In his right hand is held aloft, and brandished like a banner, a bag net. His hat is gone; his coat-tails are streaming behind him, and from the aforesaid coat-tails proceed a strange and mysterious rattling as of pill-boxes. About two yards in front of him is a bright orange-coloured butterfly. His eyes are fixed with un-deviating steadiness on that butterfly: it nears a lofty hedge: one mighty effort—a vigorous sweep of the net: *Colias edusa* sails calmly over the hedge, and the young collector falls flat on his face." These little catastrophes will happen, and not unfrequently; nor is the slight, perhaps, but inevitable, ruffling of temper produced by them much calmed down by the encouraging remark from a cool and unsympathizing bystander, of "go in and win," just when you have lost. Several species of butterflies are so common with us all the summer that they may be found in every lane and in every garden, especially those two very domestic species, *Pieris brassicæ* and *Pieris rapæ*. Mr Colman says that the former species sometimes penetrates into the heart of smoky London; and that it is no unusual sight to see the young street birds about St. Giles', whose eyes were never gladdened by the sight of green fields, get up a butterfly hunt, with cap (or rag) in hand, feel all the enthusiasm of the chase in pur-

suit of the white-winged wanderer, who, no doubt, looks sadly out of place in the great flowerless brick-and-mortar wilderness. This and the preceding species are the only British butterflies that can be charged with committing any damage to human food. In the *imago* or winged state they are utterly harmless; but not so the hungry caterpillar progeny, as every gardener knows when he looks at the long rows of cabbage, brocoli, or cauliflower gnawed into skeletons. Some seasons the *larvæ* of these two butterflies are so numerous that few vegetable gardens escape their frightful ravages. The *larvæ* of *Pieris rapæ* are much more destructive to the cabbages than his big brother *Pieris brassicæ*, who appears perfectly content to be allowed to feed on the outside leaves; while *rapæ* bores into the very heart of the cabbage, and feeds with luxurious delight on the most tender parts. There is a common saying that impertinence meets with his reward, which, I am afraid, is often the case with poor *rapæ*, who frequently gets boiled with the cabbage, beat up with butter and pepper, eaten at table by both rich and poor. Caterpillars, like other creatures, have their troubles and their trials; they have their molting and their repeated skin shiftings; they have the birds and the Ichneumon flies as the most deadly enemies to the whole *larvæ* race. The Ichneumon flies are the worst of all; they are ever on the wing in search of defenceless caterpillars, and when she has selected her victim, she pierces the body of the caterpillar with a sharp cutting instrument, which the female only is provided with, and in the wound deposits an egg. The caterpillar twists about a good deal while this sort of treatment is going on, and to all appearance seems none the worse for it; meanwhile the enemy repeats her thrusts until some twenty or thirty eggs are thus deposited in the body of the caterpillar, and then his doom is certain beyond hope. The eggs quickly hatch into grubs, and then begin to feed on the fat of the caterpillar, till they reduce him to a living mummy; but, strange to say, by some profound instinct they keep clear of all the vital organs, as if they knew that

the creatures must keep on feeding, or their own supply would speedily fail. Colman says they are just like usurers; while draining a client, they keep up his credit with the world as long as they can. The caterpillar grows weaker and weaker as the gnawing grubs within grow stronger and nearer their maturity. Having finished all the internal remains of the caterpillar, they eat their way out, and frequently spin their cocoon by the side of their dead victim, and in a short time come out a swarm of dirty black impish-looking flies. Shortly after the young caterpillar emerges from the egg he leaves off eating, and begins to prepare for his first moulting, which he must do four or five times during the course of its *larvæ* existence. He begins by fixing itself to the food plant, or whatever is near it at the time, by the means of a few silk threads, and in this position the creature is prepared for a complete change of garments. The moulting process is very curious. The first thing you may observe is a small rent down the head and thorax. When the rent is sufficiently large for the creature to poke out his head, he begins a series of wriggings and twisting, till such time as he manages to tear his old coat down the back. Another wriggle or two more, and he shuffles off the old rag. He is now dressed in a splendid new vesture, somewhat similar to the old one, but never exactly. The most splendid is generally reserved for the last. Not only does the outer husk come off at these times, but, what is more wonderful, the lining membrane of all the digestive passages, and the large breathing tubes are cast off and removed at the same time. I have often watched the *larva* of the Bombycinæ order going through this curious process; still, I am not qualified to describe all the minute particulars of this very curious process; probably, if it were well examined in all its parts by a competent party, it might be found that we had much yet to learn in this simple-looking matter which few ever think anything about. After the creature has rested a little from the fatigues of moulting, he begins to look about for something to eat: in many instances he begins by

making a meal of his old coat. Mostly all caterpillars are very voracious eaters. When placed in localities where they have plenty of food, they will consume in twenty-four hours more than twice their own weight of food. Some naturalists say that a caterpillar, one month after leaving the egg, will increase nearly thirty thousand times their original weight. Should this statement be correct, it is little wonder that they grow so quickly out of their skin. There are two other species of caterpillars that would deserve special notice, but from my very imperfect knowledge of their habits, I can do little more than just allude to them—I mean the Leafrollers and the Leafminers. The Leafrollers are very numerous. They are named Leafrollers from their curious mode of rolling up the leaf which they feed on. They roll up the leaf in the form of a tube, and fix it by the means of silk threads to the position which their habits dictate. Every species has a different plan of rolling the leaf. Some use one leaf, some take three leaves, to make one habitation. On all occasions the leaf is curled in the form of a tube, and open at both ends. The caterpillar lives and feeds in the interior of the tube dwelling; and when he has eaten himself out of house and home, he just sets about making another dwelling, and so on till he is full fed up. These snug dwellings afford the creatures a great means of protection, not only from the Ichneumon fly, but also from the birds. All the leaf-rolling *larva* are very active in their habits; and their houses being open at both ends, they can back out at one end just as fast as they can run out at the other; so that, should a bird poke his bill in at one end, they just tumble out at the other, and drop about three feet, and there he hangs by the means of a few silk threads, which they are always provided with; and when the danger is past, they wind themselves up by coiling the silk round their pro-legs, and in this way they soon regain their old home. Any one may observe the same thing for themselves during the summer months, by striking the branches of the oak trees a good rap with a stick, when

in all probability you may see a number of these little fellows suddenly drop from their tube dwellings and swaying about in the breeze till the danger is past, when a general scramble takes place among them, as if they were trying who was to be first home. The same sort of thing may be seen by taking a walk on the sheltered side of a thorn hedge on a windy day, when you may see a number of little green caterpillars, belonging to the *Tortricinæ* and *Tineinæ*, tossed about by the wind till the storm is past, when they regain their former place in the same way. If the thorn hedge is nearly in a line with your head, you will feel the silk threads tickling your face as you go along, the product of these small caterpillars blown out by the wind. The Leafminers belong to the Micro-Lepidoptera, the smallest and minutest of all known examples of the moth tribe. They are a part of the great family of the *Tineinæ*, a class of insects so minute and so numerous that the study of their habits has now become quite a new branch of insect lore. The Leafmining *larvæ*, however, do not all belong to the Micro-Lepidoptera; some are the *larva* of small flies, while others are the *larva* of very minute beetles. The mining course which some of them pursue is very curious. Some of the species mine a broad track mostly near the centre of the leaf. Sometimes you will find two caterpillars in one leaf, and when this is the case you will invariably find that each *larva* keeps side or part of the leaf; although I have sometimes seen the mine very tortuous and confused by the paths running into each other, and sometimes even crossing each. Some other species, again, seem to prefer the very edge of the leaf; and when this is the case, it is truly wonderful to see with what exactness they can skirt them, as if they were working or tracing out some plan. Some idea of the size of the creature may be easily imagined: when full grown they can mine a path round and round the centre of a thin leaf, without ever once breaking the upper or lower surface of the leaf. Here is a process of engineering the most perfect of its kind, performed by a creature scarcely larger than the

point of a fine needle. The perfect insect of some of these little *larvæ* are perfect gems. The long fibry fringe that edges their wings is so gorgeously beautiful that the finest burnished gold would appear dingy if put in comparison with one of these little tiny moths. To the naked eye some of them appear rather bronzy-looking; but place them under a magnifying power, when a combination of the finest and softest of rainbow tints appears to dance and quiver, and scatter light in all directions. The transformation then appears so perfect and so splendid, that the fertile brain of man would be puzzled to design a robe so ineffably gorgeous as the ones that cover some of these little tiny moths. Perhaps no man living has done so much as Mr Stainton has to advance the study and the knowledge of the *Tineinæ*, assisted, of course, by others. He has published eleven volumes describing the natural history of the *Tineinæ* of southern Europe, and is still going on. The subject, even in his hands, seems inexhaustible. All caterpillars of the Lepidoptera order have hard, horny jaws, and a body consisting of segments, to the number of twelve, exclusive of the head. They are also provided with legs of two kinds. Of these, the first three pairs are attached to the first three segments of the body, and these are the true or persistent, being only the rudiments of the legs of the perfect insect. The other legs are termed the pro-legs, or temporary legs. The caterpillar of the common cabbage butterfly has five pairs of legs. The feet of the caterpillar are also very curious. They are all provided with a set of minute, slender horny hooks, alternately and shorter. By the means of these hooks the creatures are enabled to lay a firm hold of the leaves of plants or other objects, and which also enables him to move along with great dispatch. The head of the caterpillar is quite a study of itself, as it differs so much from the other parts of the body. It is always a very difficult matter to give a good description of anything; consequently, I will not attempt to do so, but merely allude to the way which nature has so beautifully formed the mouth to suit the kind of work it has to perform. The creature is

furnished with a pair of jaws, horny and strong. The mouth is shaped exceedingly like a pair of pincers, because it opens and shuts from side to side, instead of up and down like all *vertebrate* animals. This curious arrangement of the mouth affords the creature great convenience when feeding, for on all occasions they feed on the thin edge of the leaf. Their mode of feeding is very interesting: they adhere so firmly to whatever they are feeding on with their close-clinging pro-legs. He then guides the edge of the leaf to his mouth by his fore legs, and stretches out his head as far as he can, when he commences a series of rapid bites, at each nibble bringing the head nearer the legs till they almost meet; then stretching out again in the same way, and so on repeating the process till a large semi-circular indentation is formed. Then shifting his position to another part of the leaf, he recommences another sweep; then another, and so on till the leaf is left a mere skeleton.

Another very important organ possessed by all lepidopterous *larvæ*, is the Spinneret for the production of silk, by which means some species merely suspend themselves during the pupa state, while other species again enclose themselves in a silk shroud, where they lie till the time of their transformation. Many of the cocoons made by the *Bombycinæ* are very beautiful and very varied both in form and texture. The moths of all the various Silk-worms belong to the *Bombycinæ*. Some species of the *Tineinæ* are remarkable for their patriarchal habits of living in tents of the most beautiful net-work. I once saw a colony of the small ermine *Yponomeuta evonymella* in Kirkconnel avenue; the top of the hedge was covered with their silk for eight or nine yards: if the colony is a large one they just keep on adding to the tent as they require more food. The tissue of their work resembles a species of pale crape; the troop will sometimes number several hundreds, so that in a short time the hedges to a great extent are soon rendered leafless. I once saw the same thing at the Ruttonbridge, the *larva* of *Melitæa artemis*, the marsh Fritillary being gregarious, they

also feed under the protection of a tent ; they hang their silk on the leaves of the Plantain and other low plants, and keep together till they are nearly full fed, when they leave their tents and each goes his own way. The Spinneret already alluded to is seated beneath the horny lower lip or labium and the two first legs, and appears in the form of a conical protuberance, from which two long tortuous tubes extend down the body of the *larva*. These tubes have a very important function to perform ; they separate the silk from the juices of the body in the form of a gummy fluid, and while it is drawn through the aperture hardens into threads. Such is the silk of the Silkworm. The duration of the *Pupa* or Chrysalis stage varies in different species according to temperature and often in the same species, which is a very wise provision, as it respects the safety of the matured insect. Butterflies have at all times been special favourites with Painters and Poets. From the Butterfly the poet draws many a fine similitude, and the moralist many a solemn lesson, and the artist, who should be both poet and moralist, might draw from the study of the butterfly wing many a pleasant theme for pencil and brush. It is a well known fact that many great names both in science and art have been enthusiastic collectors of butterflies. I might cite many examples. I will give one well known case, that of Stothard the painter. Once when he was beginning to paint the figure of a reclining Sylph, a difficulty arose in his mind how best to represent such a being of fancy. A friend, who was present, said, give the Sylph a Butterfly wing and then you have it. That I will, exclaimed Stothard, and to be correct I will paint the wing from the butterfly itself. He sallied forth, extended his walk to the fields, some miles distant, and caught one of those beautiful insects called the Peacock. Our artist brought it very carefully home, and commenced sketching it, but not in the painting room, and leaving it on the table a servant swept it away before its portrait was finished. On learning his loss, away went Stothard once more to the fields to seek another Butterfly : this time one of the tortoise-shell tribe

crossed his path, and was secured. He was astonished at the combination of colour that presented itself to him in this small but exquisite work of the Creator ; and from that moment Stothard determined to enter on a new and difficult field—the study of the insect department of Natural History. He became a hunter of butterflies. The more he caught the greater beauty did he trace in their infinite variety. He was often heard to say that no one knew what he owed to these insects—they had taught him the finest combinations in that difficult branch of art—colouring. I might cite another example which is told by Edward Newman of the impression produced on his mind by the first butterfly he ever saw. He says, when I was a very little boy indeed, I liked butterflies better than books. And I recollect, as well as it had been yesterday, the first butterfly I ever saw. It was a very very long time ago, and the butterfly was the Tortoise-shell : it was sitting on a leaf, and I called out, Oh, look what a beautiful flower, and I tried to pick it up, but away it flew. I recollect that I cried out the beautiful flower has flown away. How lasting are early impressions ! I have never forgotten that butterfly, and to this hour I cannot disconnect the idea of a butterfly and a flying flower. If I were inclined to ransack the Poets, I might fill a volume of quotations in praise of the butterfly. From the time of the early Greek poets, who so beautifully symbolized and recognised this great truth, when they gave the same name *Psyche* to the soul, or spirit of life ; and down to our own day poets of all nations have sung in sublime verse in praise of the butterfly. I have read somewhere, but I don't remember where, that the ancient Greeks were accustomed, even with their imperfect knowledge of Natural History, to have the figure of a butterfly sculptured on their tombs, in the position of flying upwards, as emblematical of the souls of their relatives flying upwards to a better world. I believe that the heart of the deep-minded can be soothed by the study or contemplation of the butterfly andozy. First, there is the grovelling caterpillar state, so emblematical of our present imperfection. The

caterpillar state represents a state of preparation for something better, something purer, brighter, and more joyous. When we look at the sluggish-looking, leaf-eating caterpillar, and compare it with what it will be, after it has completed the great change of transformation, we feel an involuntary emotion of wonder, so striking is the contrast. And lastly, when the creatures feel themselves ready for the great change, they break the skin of the chrysalis, which covers the head and thorax, and emerge feeble and languid, with the wings all crumpled up in small bundles. Soon, however, the creature acquires strength, fluids circulate through the nerves of the wings, which gradually unfold; the creature shakes and quivers them, as it feels its growing strength. At length, in the perfection of beauty, it leaves the pupa case behind, soars aloft, seeks out the flowers of the field, and begins a more glorious existence.

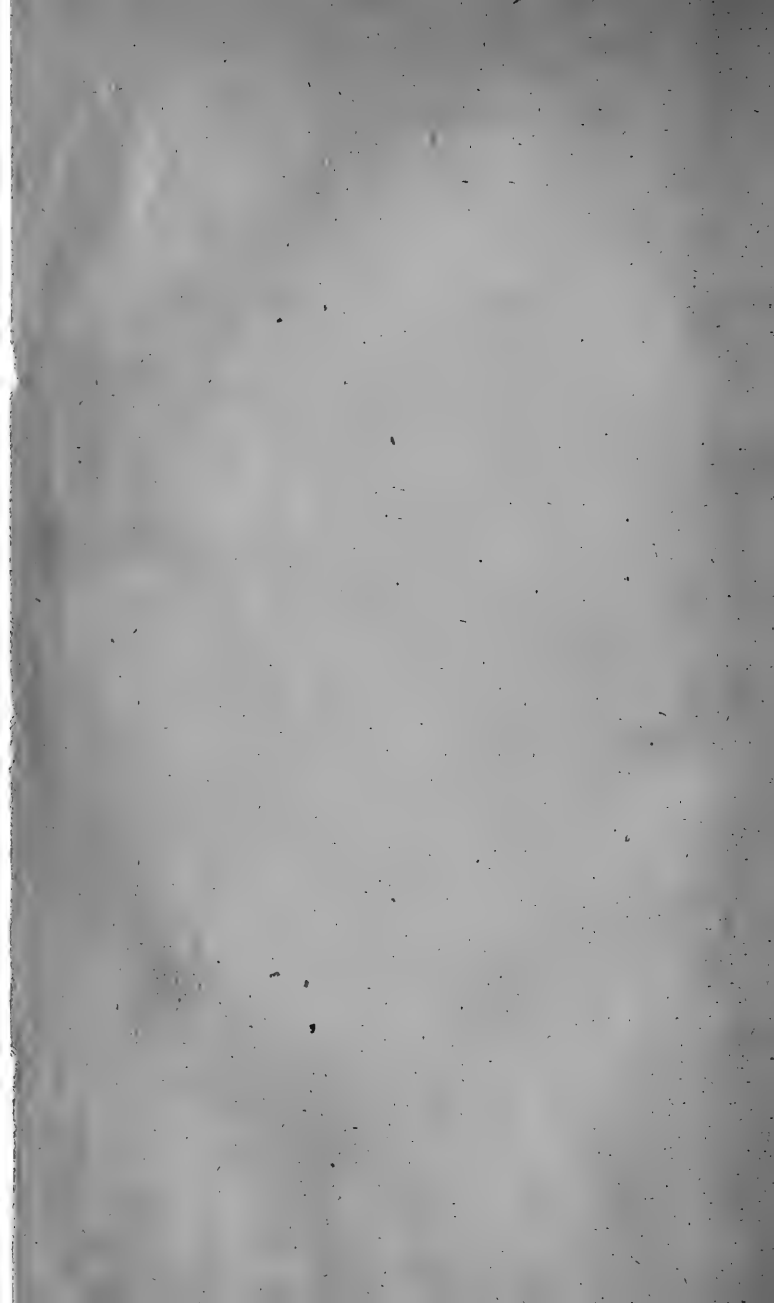


THE TRANSACTIONS
AND
JOURNAL OF THE PROCEEDINGS
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DUMFRIESSHIRE AND GALLOWAY
SCIENTIFIC, ANTIQUARIAN,
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Sessions 1876-77 and 1877-78.



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OFFICE-BEARERS AND COMMITTEE.

SESSION 1878-79.

President—

J. GIBSON STARKE, Esq., F.S.A. Scot., F.R.C.I., Troqueer Holm.

Vice-President—

WILL. M'ILWRAITH, Esq., *Dumfries Courier*.

Secretary—

ROBERT SERVICE, Corberry Hill.

Assistant Secretary—

JAMES LENNOX, Eden Bank.

Treasurer—

D. B. HART, Friars' Vennel.

Members of Committee—

Dr GILCHRIST, Crichton Royal Institution.

GEORGE ROBB, Rhynie House.

WILLIAM LENNON, Brooke Street.

JAMES THOMSON, High Street.

JAMES HUTTON, Charter House.

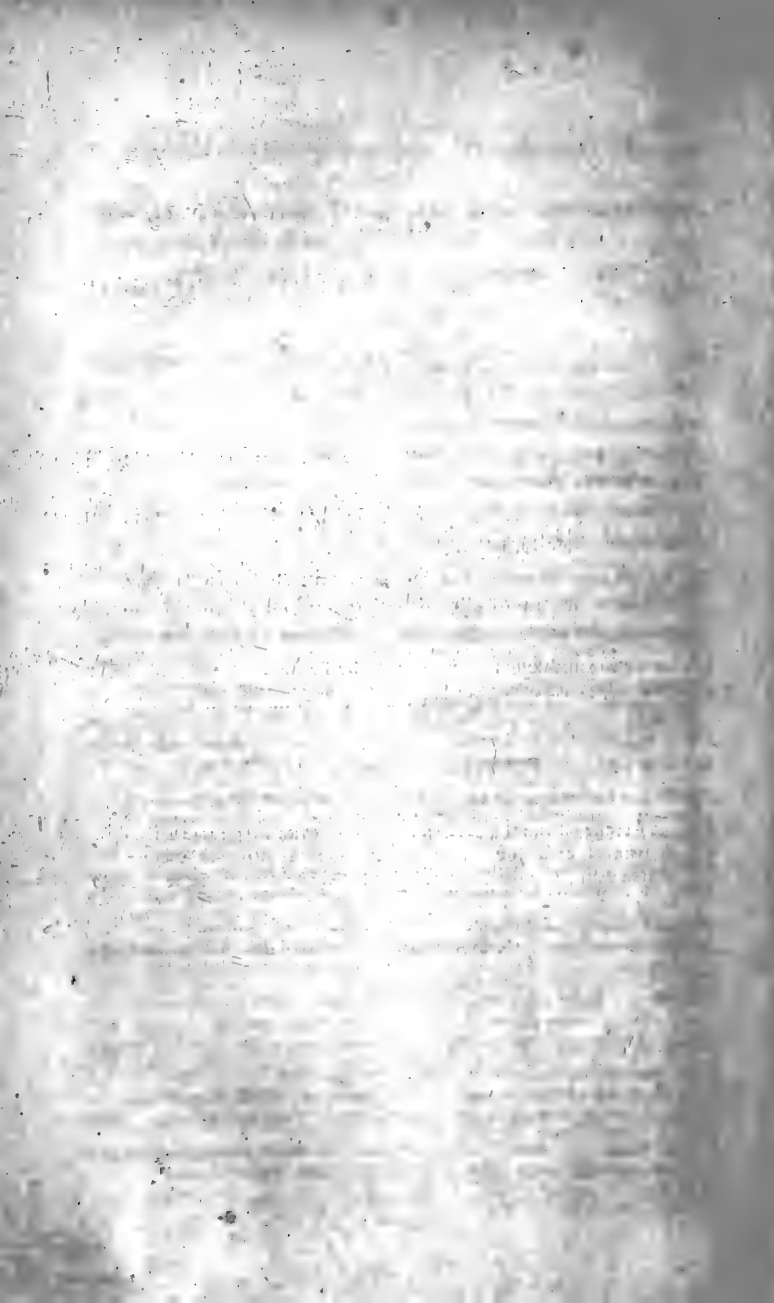
JOHN MAXWELL, Maxwelltown.

J. GLOVER ANDERSON, Corberry Place.

PETER STOBIE, Nith Street.

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JOURNAL OF THE PROCEEDINGS

OF THE

DUMFRIESSHIRE AND GALLOWAY SCIENTIFIC, NATURAL HISTORY, AND ANTIQUARIAN SOCIETY,

FOR SESSIONS 1876-77 AND 1877-78.

THE Society was instituted on November 3d, 1876, at a meeting held at No. 1, Union Street, Dumfries, by those interested in Natural History and Antiquarian pursuits. At that meeting there was a large attendance, and Dr Gilchrist was called to the chair. After a large number of specimens of Natural History and Antiquities had been examined, the Chairman stated the object of the meeting, and it was at once agreed that the Society be organised. The following gentlemen then gave in their names as members :—

- | | |
|--|---|
| John Adair, watchmaker, High Street. | William Lennon, C.R. Institution. |
| William Adamson, 46, High Street. | John Lennox, Edenbank. |
| James Aitken, The Hill. | James Lennox, do. |
| William Allan, chemist. | Alex. Loudon, High Street. |
| J. Glover Anderson, 138, High Street. | Dr Macdonald, Castle Street. |
| Jas. Bell, commission agent, Bank St. | R. W. Macfadzean, Buccleuch Street. |
| Wm. Biggar, jr., Lauricknowe. | John M'Lean, jeweller, High Street. |
| Thomas Costin, jr., Roseland. | Louis M'Naught, chemist, High St. |
| Dr Coupland, Dumfries. | Capt. Moriarty, Terregles Street. |
| Dr Cranstoun, The Academy. | Alex. Maxwell, Saughtree. |
| Dr John Cunningham, Castle Street. | John Maxwell, King Street. |
| James Davidson, jr. of Summerville. | James Moodie, Geddes Place. |
| R. A. Dickson, Bank Street. | Dr Murray, Buccleuch Street. |
| W. A. Dinwiddie, Greenbrae House. | James Murdoch, Rosemount Terrace. |
| Rev. W. N. Dodds, chaplain, Crichton
Royal Institution. | T. K. Newbigging, Kirkbank. |
| Robert French, Bank Street. | J. H. Nicholson, Church Crescent. |
| W. G. Gibson, clerk, Crichton Royal
Institution. | William Pool, chemist. |
| Dr Gilchrist, medical superintendent,
Crichton Royal Institution. | Dr Russell, Crichton Royal Institution. |
| J. J. Glover, Castle Street. | J. Rutherford of Jardineton. |
| F. W. Grierson, Chapelmount. | J. Reid, Greystone Cottage. |
| J. D. Grierson, Wallacehall, Closeburn. | R. Service, Galloway Street. |
| Dr Grierson, Thornhill. | J. G. Scott, chemist. |
| D. Baird Hart, Friars' Vennel. | Dr Sharpe, Eccles House, Thornhill. |
| Wm. Hastings, English Street. | James Shaw, Tynron Schoolhouse,
Thornhill. |
| W. S. Hogg, Victoria Terrace. | Peter Stobbie, 46, High Street. |
| Alex. Hogg, ditto. | Joseph Thomson, Gatelaw Bridge,
Thornhill. |
| James Jardine, <i>Courier Office</i> . | Jas. Thomson, watchmaker, High St. |
| Dr Kerr, Buccleuch Street. | D. Welsh, Octavio House. |
| Adam Lambert, Dumfries. | R. Wilson, 127, High Street. |
| | John Ziegler, Dumfries. |

From that number the following were chosen as office-bearers and committee of management, and were instructed to meet on November 10th to draw up a constitution and rules, choose a name for the Society, &c., and report to a subsequent meeting :—

President—
Dr Gilchrist, Crichton Royal Institution.

Vice-President—
J. Rutherford, Esq. of Jardineton.

Secretary—
R. Service, Maxwelltown.

Treasurer—
J. Moodie, Geddes Place, Maxwelltown.

Members of Committee—

J. Glover Anderson, 138, High St., Dumfries.

Dr Grierson, Thornhill.

W. G. Gibson, C.R. Institution.

J. Reid, Irish Street, Dumfries.

R. W. Macfadzean, Buccleuch Street, Dumfries.

F. W. Grierson, Chaplemount, Maxwelltown.

D. B. Hart, merchant, Dumfries.

J. G. Scott, chemist, Dumfries.

November 17th, 1876.

DR GILCHRIST in the Chair.

AT this meeting, held in the Town Hall, the Chairman submitted the following Rules, prepared by the Committee, and Revised by a Sub-Committee, which were unanimously approved of.

1st. The Society shall be called the DUMFRIESSHIRE AND GALLOWAY SCIENTIFIC, ANTIQUARIAN, AND NATURAL HISTORY SOCIETY.

2d. The aims of the Society shall be to secure a more frequent interchange of thought and opinion among those who devote themselves to Scientific, Archæological, and Natural History studies; to elicit and diffuse a taste for such studies where it is yet unformed; and to afford increased facilities for its extension where it already exists.

3d. The Society shall consist of Ordinary, Honorary, and Corresponding Members. The Ordinary Members shall be persons resident in Dumfriesshire and Galloway, present and admitted at a Public Meeting called for the purpose on 3rd November, 1876, and those who shall afterwards be proposed by two Members (to one of whom the candidate shall be personally known) and admitted at an Ordinary Meeting of the Society by a vote of the majority present. The Honorary and Corresponding Members shall consist of persons distinguished for attainments connected with the objects of the Society, who cannot attend as Ordinary Members, and who shall be proposed and admitted at an Ordinary Meeting in the same way as Ordinary Members.

4th. The Ordinary Members shall contribute annually the sum of Two Shillings, in advance, to the funds of the Society, or such other sums as shall be fixed at each Annual Meeting.

5th. The Office-bearers of the Society, who shall be Ordinary Members, shall consist of a President, Vice-President, Secretary, and Treasurer, and a Committee consisting of eight Members, three to form a quorum, holding office for one year only, but being eligible for re-election at the Annual Meeting of the Society.

6th. The Ordinary Meetings of the Society shall be held on the first Friday of each month, and shall continue during winter, beginning in October and ending with April, and at which the ordinary business of the Society will be transacted, papers read and discussed, and objects of interest examined.

7th. Field Meetings shall be held during the summer, beginning with May and ending with September, to visit and examine places and objects of interest, to give field demonstrations, to collect specimens, and otherwise carry out the aims of the Society, arrangements for which shall be made at the last meeting of each Winter Session.

8th. The Annual Meeting of the Society shall be held on the first Friday of October, being the first meeting of the Winter Session, at which office-bearers and members of the committee shall be elected for the ensuing year, reports, general and financial, for the past year will be received, and proposals for the extension and improvement of the Society will be heard and discussed.

9th. Each Member may introduce a friend to any Ordinary or Field Meeting of the Society—such friend not to be admitted more than twice during the same year.

10th. The Secretary shall keep a minute book of the proceedings of the Society, and a register of the members, ordinary, honorary, and corresponding, and shall give in a report of the Society's proceedings at the Annual Meeting.

11th. The Treasurer shall collect and take charge of the annual subscriptions and funds of the Society, and make payments therefrom, under the direction of the Committee, to whom he shall annually submit an account of his intromissions, to be audited and prepared for submission to the Society at its Annual Meeting.

12th. Alterations and Repeals of the foregoing Rules and new or additional ones, shall only be made by three-

fourths of the Ordinary Members present at any meeting of the Society, of which notice shall have been given at the previous monthly meeting.

13th. The Secretary shall at any time call a meeting of the Society, on receiving the instructions of the Committee, or the requisition in writing of any six Ordinary Members.

14th. All papers read before the Society shall become its property.

December 1st, 1876.

Being now duly constituted, the first regular meeting was held in the Town Hall—Dr GILCHRIST in the chair.

Mr Dudgeon of Cargen ; Mr M'Ilwraith, Editor of *Courier* ; Mr Fairley, Maxwelltown ; Mr Robertson, *Herald* Office ; Mr Thomas Jackson, Nith Place ; Dr Thompson, Castle Street ; and Major Bowden, Lochfield, were elected Ordinary Members. Mr Dunsmore, Castlehead, Paisley, was elected a Corresponding Member.

Mr Gibson exhibited a fine specimen of the Rusty Hoof Fungus, *Polyporus ignarius*, a species which grows on decaying willow trees, and in this locality has been found only at Dalscone and Nethertown of Troqueer. Also seeds of the Ivory Nut Palm, *Phytelephias macrocarpa*, a native of the low valleys of the Peruvian Andes, of which large quantities are imported to be used as a substitute for ivory in the manufacture of various small articles. Mr Gibson also showed some Samian Ware, recently dug up at Carlisle from a depth of twelve feet.

Mr Lennon exhibited a remarkable collection of British Water Beetles, containing 120 of the total number of 135 species recorded as occurring in Britain. Some of them are very rare, notably *Haliphus striatus*, *Hydroporus obsoletus*, and *H. incognitus*, only discovered in Britain within the last few years ; and *Hyphydrus ovatus*, found in Auchencrieff Loch, and not known to inhabit any other part of Scotland.

The Chairman delivered a most interesting lecture on "My First Lesson in Geology and its Results," in which, after detailing the circumstances which had led him to take

up the study of Geology, he proceeded to give a general view of the different strata forming the earth's crust. Other Geological phenomena, such as the Upheaval and Subsidence of the Land, Volcanic Action, Disintegration of Rocks from Rain and other causes, and Formation of Deltas were explained, and illustrated by reference to a number of Maps and Diagrams. A large collection of specimens of Rocks and Fossils, most of them procured in the district, was also shown in illustration of the subject. Special attention was directed to several Stones bearing the peculiar striated marks of the Ice Age, and also to others, which had been rounded and worn by the action of water, the points of difference being particularly pointed out.

Mr Davidson read a paper on "Two of the Platanoid Metals," *Palladium* and *Rhodium*, giving an account of their properties and uses. Several specimens of these metals were exhibited, prepared by Mr Davidson, and stated to be perfectly pure.

January 5th, 1877.

The second meeting of the Session was held in the Town Hall—Dr GILCHRIST in the Chair.

Mr Gilchrist Clark of Speddoch; Dr W. A. F. Browne Crindau House; Mr Simpson, Crichton Institution; Mr Greig, Terreglestown; Mr Beattie, Buccleuch Street; Mr Ludwig, "Scottish Borderers"; and Mr Halliday, Stakeford, were elected Ordinary Members. Dr Battershell Gill, Regent's Park, London, was elected a Corresponding Member.

There was exhibited, on behalf of Dr W. A. F. Browne, a magnificent series of Micro-Photographs of the Brain, and much regret was expressed that owing to the unfavourable weather Dr Browne was unable to be present to explain them.

The Chairman exhibited specimens of the old Red Sandstone, with beautifully marked worm tracks from Cumberland and Orkney.

Mr Rutherford gave an interesting lecture on the "Electric Battery and Induction Coil," illustrated by a number of beautiful experiments.

February 2nd, 1877.

The Third Meeting of the Session was held in the Town Hall—Mr RUTHERFORD in the Chair.

The Chairman exhibited a specimen of the Great Northern Diver, *Colymbus Glacialis*, which he had that day shot on the Cairn.

There were also shown three fine Salmon Smolts and an Eel, which it had disgorged when captured.

Mr Thomson, Gatelawbridge, read a paper on "The Origin of the Permian Basin of Thornhill." (*See Transactions.*)

Mr Simpson read an account of "The Recent Discoveries at Mycenæ," in which full details of Dr Schliemann's researches were given.

March 2nd, 1877.

The Fourth Meeting of the Session was held in the Town Hall—Dr GILCHRIST in the Chair.

Mr Welsh, Waterloo Place; Mr Gooden, Corberry Place; Mr J. Gibson Starke, Troqueer Holm; Mr Johnston, Castle-milk; Mr Smith and Mr Landells of the *Courier* Office, were elected Ordinary Members.

The Chairman exhibited a number of Minerals collected by himself in Switzerland, Oxide of Tetanium, a set of Ornaments made of Derbyshire Spar, and a curious piece of Chinese Carved Work.

Mr Lennon showed a specimen of the Death's Head Moth, *Acherontia atropos*, found at Albany Bank last September.

Mr Jackson exhibited the Commissary Seal of Dumfries, of the time of Charles I., which is now in his possession.

The Secretary showed a box of Lepidoptera forced in artificial heat, most of which had emerged from the Pupa

state four or five months earlier than their normal time of appearance.

The Secretary intimated that he had received the following publications as a donation from the Royal Society of Christiania:—*Catalogues of the Coleoptera*, and of *the Lepidoptera of Norway*, *Der Pflanzenwelt Norwegens*, *Researches on a New Genus of Starfishes*, and a *Map of Norway*.

Mr Shaw gave a most interesting address on the "Fertilization of Flowers by Insects," illustrating his remarks by reference to a large number of diagrams of the various ways in which flowers are fertilized by insect agency.

Mr Lennon read a notice of the capture by himself of *Melitæa diIyma*, a Butterfly hitherto unrecorded as British, and a specimen of which he had secured a few years ago at Dalscairth. (*See Transactions*.)

The Chairman made some remarks on "An unrecognised cause of Floods," which, he stated, was the gradual silting up of river beds with stones, sand, and mud, brought down from the higher grounds, until the bed of a river was nearly of the same level as the surrounding lands.

April 6th, 1877.

The Fifth and last Ordinary Meeting of the Session was held in the Town Hall—Dr GILCHRIST in the Chair.

Mr Halliday, Maxwelltown, and the Rev. J. A. Campbell, Troqueer Manse, were elected Ordinary Members.

The Chairman exhibited a fine specimen of Graphic Granite; Mr Davidson, a Stone Celt found in Mabie Moss; Dr Grierson, a skin of the Common Eel, *Anguila acutirostris*, upwards of four feet long.

Mr Simpson read a most elaborate paper on the "Great Pyramid of Ghizeh," giving a full description of that wonderful structure, and stating the views held in relation to its purposes and uses by Professor Piazzi Smith and other eminent authorities.

Mr Starke read a paper on "The Sugar-Cane," in which

he described its manner of growth, the various sorts in cultivation, and the process of manufacture into sugar and rum.

Dr Grierson read a "Tribute to the Memory of Racky." (*See Transactions.*)

This concluded the business of the evening and the first Winter Session of the Society.

SESSION 1877-78.

October 5th, 1877.

The Annual General Meeting commencing a new Session was held in the Town Hall—Dr GILCHRIST in the Chair.

The Rev. J. Fraser, Colvend, and Mr Brown, Geddes Place, were elected Ordinary Members.

Mr F. W. Grierson exhibited a beautiful Serpent Skin from India, measuring almost nine feet in length; the species was unknown.

The Chairman exhibited a few fine pieces of Rock Salt from the Cheshire Mines, also some Marl from Carlingwark Loch.

In the unavoidable absence of Mr Moodie, Treasurer, the Secretary read that gentleman's Annual Report, which showed that the funds were in a satisfactory condition, as there was a balance of £1 8s 9d in favour of the Society.

The Chairman read an interesting account of the principal Geological features of the places where the Field Meetings of the past summer were held.

The Secretary read the First Annual Report, from which it appeared that the progress of the Society was satisfactory.

The following Office-Bearers and Committee were appointed for another Session:—President, Dr Gilchrist; Vice-President, Mr Rutherford; Secretary, Mr R. Service; Treasurer, Mr D. B. Hart; Committee, Messrs Anderson, Gibson, Macfadzean, Grierson, Scott, Adamson, Maxwell, and Beattie.

It was agreed that the Society should be formed into Sections, each to be under the charge of competent Members, who would promote the interest of their particular branch of study as far as possible, and at the end of the Session give in a Report of their department. The following arrangement was agreed to :—Antiquities, Mr J. Glover Anderson ; Botany, Messrs Gooden and Grierson ; Chemistry, Mr Davidson ; Entomology, Mr Lennon ; Geology, Dr Gilchrist ; Microscopy, Mr Rutherford ; Ornithology, Mr Hastings ; and Zoology (general), Dr Grierson.

November 2nd, 1877.

The Second Meeting of the Session was held in the Town Hall—Dr GILCHRIST in the Chair.

Messrs Joseph Scott, High Street, and James Houston, Greyfriars' Street, were elected Ordinary Members.

The Chairman exhibited some pieces of Calcareous Spar from Cuban Caves, Clay Nodules, a Californian Lichen, and a beautiful Chinese Silk Reel ; Mr Glover Anderson—a plan of the Sedilia of Lincluden Abbey ; Mr Service—a specimen of *Sphinx Convolvuli* caught in a Vinery at Edenbank, and a specimen of *Aromia Moschata*, caught at Moniaive on 3rd September last, being the first known Scottish specimen. Mr Hogg sent a Mollusc that he had found alive among Barcelona nuts on the preceding day. The species was unknown to those present.

Mr Rutherford read a paper on "The Telephone," giving a description, with the aid of diagrams, of the construction, principles, and mode of working of this remarkable instrument.

Mr Service, Secretary, read a paper on "The Appearance of *Cobias Edusa* in the South of Scotland in 1877," and showed a series of 19 specimens of the butterfly captured in the district. (*See Transactions.*)

December 7th, 1877.

The Third Meeting of the Session was held in the Town Hall—Dr GILCHRIST in the Chair.

The Chairman exhibited a number of rare and valuable Crystals and some Isle of Wight Peebles ; Mr F. W. Grierson, a series of Incrustations of Lime, and a Coin of Ptolemy I. of Egypt ; Mr Lennon, one of the boxes distributed last summer by the German Government for the use of their officials, containing the ova, larvæ, pupæ, and imagines of the Colorado Potato Beetle. The insect itself was also shown.

It was stated that the Mollusc sent to the previous meeting by Mr Hogg had been ascertained from inquiry at the British Museum to be the *Helix Macularia* of Müller, a native of the Canary Islands, Spain, and the North of Africa.

Messrs Paterson, clothier ; Hutton, Charter House ; Sinclair, chemist ; Gibson, Bank of Scotland ; and Moir, chemist, were elected Ordinary Members. Mr Hastie, Curator of Royal Institution, Edinburgh, and Mr J. W. Lancaster, Birmingham, were elected Corresponding Members.

Mr Shaw read a paper entitled "Lessons from the English Names of Animals and Plants," showing how most of the names of our domestic animals had been preserved almost unchanged in many languages since they had their origin with the Aryan people, who at a remote period inhabited the Highlands of Western Asia. The names of a great number of Plants and Animals were also explained and their history given.

Mr Glover Anderson read "Notes on Lincluden Abbey." In concluding, Mr Anderson condemned in strong terms the present state of the ruins, and urged the desirability of having something done at once to arrest the progress of destruction. (*See Transactions.*) A long and animated discussion followed, but eventually it was agreed that the following Committee be appointed to ascertain the feelings of the proprietor—Captain Maxwell—in the matter, and report to next meeting :—Dr Gilchrist, Messrs Starke, M'Dowall, Glover Anderson, Service, Gibson, Thomson, and Rutherford.

January 4th, 1878.

The Fourth Meeting of the Session was held in the Town Hall—Dr GILCHRIST in the Chair.

Messrs Robb, English Master of the Academy ; Callander, High Street ; Thomson, Irish Street ; Geddes, Hannahfield ; Matthewson, Dalbeattie ; Malcolm M'L. Harper, Castle-Douglas ; and Charles Black, Arbigland, were elected Ordinary Members.

Mr Gibson exhibited the Pictograph, a new instrument for copying pictures ; Dr Grierson, a specimen of the Short-tailed Vole and the Water Rail, *Rallus aquaticus* ; the Chairman some false Cat's Eye Gems from India, with which Mr Starke contrasted the real article ; Mr Rutherford, a pair of Telephones ; Mr Service, twenty-four species of Plants in bloom in the open air, a result of the remarkably mild winter, as follows :—*Primula veris*, *Reseda odorata*, *Garrya elliptica*, *Myosotis arvensis*, *Arbutus unedo*, *Polyanthus*, *Hepatica*, *Berberis Darwini*, *Mahonia aquifolium*, *Lamium maculatum*, *L. amplexicaule*, *Erysimum sp.*, *Cheiranthus cheiri*, *Alsine media*, *Senecio vulgaris*, *Bellis perennis*, *Alopecurus pratensis*, *Laurustinus*, *Charlock*, *Lilac Primrose*, *Cowslip*, *Viola tricolor maxima*, *V. odorata*, and *Aubrietia purpurea*.

The Committee appointed at last Meeting reported that they had addressed a letter to Captain Maxwell, "drawing his attention to the present unsatisfactory condition of the ruins of Lincluden Abbey, and stating that a general wish had been expressed by the Society that some steps should be taken to protect it from further decay, and preserve it as an interesting and instructive monument of the past," and that no answer had yet been received. After some conversation it was agreed to request Mr M'Dowall and Mr J. Gibson Starke to wait on Captain Maxwell, a course which it was thought would sooner lead to a good result.

In the absence of Mr Thomson, Gatelawbridge, Mr Hart read that gentleman's communication on "A new Glacial Deposit near Thornhill." (*See Transactions.*)

Mr Service read a short paper giving an account of the history and habits of "A Hothouse Pest" which had appeared in the district a few years ago, and had since spread from one glass-house to another with great rapidity. The insect—the mealy winged Aleurodes—was also shown.

The Chairman then gave an address on "Clouds," illustrated by a number of beautiful diagrams.

February 1st, 1878.

The Fifth Meeting of the Session was held in the Town Hall—Dr GILCHRIST in the chair.

Rev. W. Graham, Maxwelltown ; Mr George Armstrong, Corberry Cottage ; and Mr James Hogg, Saughtree, were elected Ordinary Members.

The Chairman exhibited a number of rare minerals, including Bituminous Shales from Brazil, Carbonate of Nickel, Carbonate of Cobalt, and others, and some Lichens from the north of Scotland ; Mr J. G. Anderson, a number of measured drawings of the windows of Lincluden Abbey as they appeared when perfect.

Mr Service brought under the notice of the Society the appearance of large numbers of Bullfinches in the district during the last two years, which were proving most destructive to the fruit trees.—Dr Sharpe remarked that the same thing had happened in Eccles ; these birds had been very scarce for many years, but were now met with commonly.

Mr W. G. Gibson stated that a number of Bullfinches' Nests had been seen in the grounds of the Crichton Institution, in the summer of 1877, for the first time.

A letter was read from Mr Thomson, Gatelawbridge, in reply to objections which had been stated to his paper, read at last meeting. The glacial origin of the deposit in question was re-affirmed, and further proofs and arguments advanced in support of that statement.

The Deputation appointed at last meeting reported that "they had held an interview with Capt. Maxwell of Terregles on the 16th ultimo, regarding the present condition of Lincluden Abbey. Capt. Maxwell explained that he had delayed answering the letter addressed to him by the Society on the

subject, because he found that to do all he considered necessary for the protection of the ruins would, in addition to excavations for the purpose of opening up the old foundations of the edifice, entail a great amount of money, and he did not feel certain, from the terms of the letter, how far the Society expected him to proceed in this expenditure. Mr Starke expressed his opinion that the more urgent remedy required was one to prevent further desecration and destruction of the Ruins by daily wanton mischief on the part of roughs, and also means to prevent cattle from entering the Chancel. To meet these it was suggested that a gate should be placed at the entrance of the Chancel, and a notice put up requesting visitors to report to him, as proprietor, all such wanton mischief as might come under their observation. Captain Maxwell mentioned that he has at present no cottage on the ground where the key of a locked gate might be kept; but it was stated that in the opinion of the Deputation a gate, although not locked but simply fastened with a notice to visitors to close it after them, would go a great way to remedy the evil in question, and the Deputation were glad to be able to report that Capt. Maxwell agreed to carry out these suggestions."

The meeting received the report with much pleasure and satisfaction, and it was ordered to be engrossed in the minutes. The thanks of the meeting was unanimously awarded to Messrs Starke and M'Dowall for the trouble they had taken in the matter.

After some discussion, it was then unanimously agreed that the Society petition the House of Commons in favour of Sir John Lubbock's Ancient Monuments Protection Bill.

Mr Lennon, being unable to attend the meeting, the Secretary read that gentleman's paper on "The Rarer Coleoptera of the District." (*See Transactions.*)

Dr Sharp made some remarks on the Geographical Distribution of Animals, with special reference to Mr Lennon's paper, and which were so much appreciated that Dr Sharp was requested to continue the subject on a future occasion.

March 1st, 1878.

The Sixth Meeting of the Session was held in the Town Hall—Dr GILCHRIST in the Chair.

Messrs Stewart and Hal. Gordon, Moatbrae; J. H. Maxwell, editor of *Kirkcudbrightshire Advertiser*; and William Copland, Nithsdale Mills, were elected Ordinary Members. Mr Starforth, architect, Edinburgh, was elected a Corresponding Member.

Mr Lennon exhibited a curious Jewel Case made of African Mahogany, and said to be nearly 300 years old; Mr Adamson—a small Stone Celt found in James Street when making excavations for new buildings; Mr Jackson—2 large Hungarian Silver Coins of the 16th century; Mr J. G. Anderson—the first volume of the *Dumfries Weekly Magazine* of date 1773, of interest as being the first newspaper published in Dumfries.

Dr Grierson delivered a long and interesting lecture on “What and How to send from Distant Lands,” in which he explained the different modes of collecting, preserving, packing, and forwarding specimens of Natural History, and in concluding he urged all who might have it in their power to send such to the Thornhill or other local museums, in preference to sending them to any of the large National Museums, where they already had enough, and, moreover, could buy what they needed. The lecture was illustrated by a number of specimens from various parts of the world, of which one of the edible nests of a species of Swallow from Sumatra, a Humming Bird and nest from Demerara, and a Wasp’s nest—*Polistes morio* of *Reaumur*—also from Demerara were the most remarkable.

April 5th, 1878.

The Seventh and last Ordinary Meeting of the Session was held in the Town Hall—Dr GILCHRIST in the chair.

Messrs Low, chemist; Thomson, ironmonger; Sir W. Broun, Bart.; and Mr Culton, Dildawn, were elected Ordinary Members. Mr M’Fadzean, Co. Galway, was transferred to the list of Corresponding Members.

Mr Moodie exhibited an Egg of the Common Fowl, to which a corrugated coil of calcareous matter was attached at the small end; also a number of pieces of Bottle Glass which had been completely rounded and smoothed by the action of the gizzard of a common fowl. Mr G. Armstrong, Corberry Terrace, showed a Silver Boddle of Charles I., found in the Corberry Nursery.

Considerable discussion took place on a proposal that a selection of the Society's proceedings and transactions be prepared during the Summer for publication.

Mr Service moved, and Mr J. G. Anderson seconded, that the proposal be adopted. Mr Beattie moved an amendment, and Mr Maxwell seconded, that the matter be held over till next Annual Meeting. On a division being taken, 15 voted for the amendment, and 8 for the motion, the former being thus carried by a majority of 7.

Mr Shaw read a paper on "Modern Theories of Colour in regard to Animals," in which he showed, with the aid of coloured illustrations, how in many cases the colours of Insects, Animals, and Birds had assumed a protective resemblance (apparently) to the objects amongst which they lived.

Mr M'Ilwraith made some remarks on "Some Flint Chips" taken from an arrow maker's shop amongst the sand-hills, near the farm of Torrs, in Wigtownshire.

Dr Gilchrist gave an address on "Zoophytes," in which he showed and explained their structure and economy by means of a large and beautiful series of specimens and some excellent coloured drawings.

September 4th, 1878.

A Special Meeting was held in the Mechanics' Institute —Dr GILCHRIST in the chair.

The Chairman stated that the purpose of the Meeting was to take into consideration an offer made to himself, as representing the Society, by Mr Corrie, Ashbank, to hand over to this Society the property belonging to the former Natural History and Antiquarian Society.

It was moved by Mr Rutherford, and seconded by Mr W. G. Gibson, that Mr Corrie's offer be accepted, and Mr Starke moved that the thanks of the Society be conveyed to Mr Corrie, both of which motions were unanimously agreed to. The Secretary was then instructed to receive the property referred to from Mr Corrie, and take charge of it in the meantime.

October 4th, 1878.

The Annual Meeting beginning the Session of 1878-79 was held in the Mechanics' Institute—Mr RUTHERFORD in the chair.

Rev. W. Lytteil, M.A., Kirkmahoe Manse, and Mr Murdoch, Rosemount Terrace, were elected Ordinary Members. Mr P. Cameron, jr., Glasgow, and Mr J. Thomson, Gatelawbridge, were elected Corresponding Members, the latter being transferred from the list of Ordinary Members until his return from Africa, whither he is about to proceed with an Exploring Expedition.

Mr F. W. Grierson exhibited a large Herbarium of Phanerogamic and Cryptogamic Plants collected during the past season, and also an Instrument to explain the changes of the seasons, which he named the *Horaphraziter*.

The Secretary read his Annual Report, which showed that the Society had a very successful session. The Membership was now 100, and the average attendance at the Ordinary Meetings had been 27, and at the Field Meetings 16.

The Treasurer read his annual statement, showing a balance of £3 17s 5½d in favour of the Society.

Mr Grierson read the report from the Botanical Section, enumerating the plants and their habitats, which had been met with when at the Field Meetings and elsewhere.

Mr Glover Anderson read the report of the Archæological Section, briefly going over the objects of Antiquarian interest that had been visited by the Society.

The Chairman made some remarks explanatory of two beautiful Micro-photographs executed by himself of a fly's tongue, and a specimen of *Pediculus vestimenti*

Mr Hastings read some "Ornithological Notes," in which, after stating that although he had few opportunities of seeing for himself what is to be seen in wild nature, still many interesting birds that had been collected in the district were sent to him for preservation, he said that last August a young Crossbill had been sent to him from Palgowan, a sheep farm in Penpont, and which no doubt had been bred in that part of

the country. They had now entirely disappeared from the Dalwinton woods, where their nests were at one time frequently met with. In the neighbourhood of Palgowan there is a shepherd's house known as the Lorg, situated at the head of the Water of Ken, and here there is a famous breeding-place of the Raven, Buzzard, and Mountain Ouzel. A little further down the Glen, on the hillside, there is a larch plantation, the trees in which are of no great height but are thickly studded with Heron's nests. Mr Hastings said that during the past year he had received more of the Terns or Sea Swallows than ever before. He had received the Lesser Tern, the smallest species of the genus, from Carsethorn; the Common Tern, which, although common on some parts of the coast, was not so with us; from the Solway Frith, very many of the Arctic Tern; and three specimens of the Caspian Tern from the Scaur, near Dalbeattie, where they had been shot last October.

It was then agreed that a selection of the Society's Proceedings and Transactions be printed for the use of the Members.

Office-bearers, Committee, and Conveners of Sections were then appointed for the ensuing Session.

FIELD MEETINGS OF 1877.

The place chosen for the First Meeting was the farm of Killochan, and accordingly, on the 5th of May, a party of sixteen drove in a waggonette out to near the head of The Glen. Thence, under the guidance of Mr Rutherford, they were conducted down the right bank to the Glen Mills, where Mr Rutherford pointed out a rock which salmon were unable to surmount when ascending the stream, and stated as a fact that might throw some light on the vexed question whether parrs were the young of the salmon, that no parrs were ever found above that rock. Proceeding up the left bank, the ruins of an old castle (or chapel, or possibly

neither) known as Killochan Castle, were next inspected. It is situated on a position of great natural strength ; the remains of what appears to have been a ditch are quite visible on three sides, and the fourth is formed by the almost precipitous sides of the Glen. A field below Killochan farm house, where drainage operations were being carried on, was next examined. At a depth of a few feet below the surface there appeared to be an extensive deposit of boulder clay, and large quantities of this had been thrown out in forming the drains. The peculiar striæ, denoting the grinding action of the ice during the "Glacial Period," were very clearly seen on almost all the stones that had been exposed. A short walk further, and the Gull Loch was reached—one of the great breeding places of the Blackheaded Gulls (*Larus ridibundus*) which at once resented the intrusion on their parental cares by loud screaming and a copious use, no doubt, of very bad (bird) language. It was certainly a pretty sight, so many thousands of these beautiful birds all on the wing together, while their incessant cries harmonised well with the rugged nature of the surroundings. In walking round the loch the nests were seen in great abundance, built of coarse grasses, and placed a few inches above the surface of the water. Dozens of nests containing eggs were seen within the space of a few yards square. Dr Gilchrist, in a few remarks, stated that the loch was, without doubt, formed by a glacier which had descended from the surrounding hills till, filling up the hollow of which the loch was the centre, it had flowed off in the direction of the Glen Mills. Turning homewards, on coming over the hill a magnificent prospect broke on the view. The whole valley of Lower Nithsdale, with the town of Dumfries in the centre, the Wamphray hills, with their snowclad summits gleaming in the rays of the afternoon sun, and away to the south, part of the Solway Firth, the whole seen through an atmosphere of singular clearness and purity, formed a picture of surpassing beauty, and one which will not fade easily from the memory of those who were present. Leaving the brow of the hill with some reluctance, the old quarry

above Cluny was next visited, and there the direction of the Silurian strata was well seen, and on some parts the action of the waves of ancient seas was very clearly marked. A number of Geological specimens were here secured, but during this meeting the Botanists and Entomologists of the party were unsuccessful in getting any but common species. The long-continued cold and drought of Spring had retarded the growth of even the common wild flowers—the common yellow Primrose, some Violets, and a few other common Plants, were almost the only ones yet in bloom, and, as a natural sequence, insects were also scarce. A large number of that pretty little fern, the Moonwort (*Botrychium lunaria*) was, however, secured in its general habitat, an old pasture field.

The Second Meeting was held at Amisfield on 2d June. There was an attendance of 21, the party leaving Dumfries by the 1.45 p.m. train for Amisfield Station, where they were met by Mr Jackson and conducted to the Mansion-House. On reaching the entrance gate a splendid Weeping Elm attracted much attention; its long trailing branches would have effectually barred the way, but they had been trained to stout poles, thus forming a beautiful green arch. The lower side of the avenue was very gay with the wild flowers of Spring—the blue wood Hyacinth, the yellow Primrose, and the crimson Lychnis forming bright masses of colour. Passing round the Mansion-House, Mr Jackson pointed out some remains of arches, traces of an older building, with which the present one has been incorporated. The old Tower was then inspected, Mr Jackson pointing out the more interesting features of this ancient building. Several of the lower floors are still in use, and seem fitted to stand for many years to come, but the upper ones, with the exception of the great oaken rafters, are all gone. A narrow spiral stair of stone leads up to the highest part of the Tower, an oblong apartment, loopholed on all sides, and in which a watchman was constantly kept in the brave days of old to give notice of approaching danger, or of signals from the beacon fires on distant hills. Several of the more adventurous and least

corpulent members of the party ascended to this apartment and enjoyed the grand outlook. A few pieces of furniture still remain ; part of a table, at which James the V., the "Gudeman o' Ballangeich," is said to have dined, and some other remnants were pointed out. A murderous-looking steel crossbow, which had probably done some execution in its day, was also examined. A visit was next made to the Camp, which is situated about a hundred yards from the Tower. It is believed to be the work of the Romans. It is nearly square, and a wide ditch still environs it on three sides, and what seems to have been a gate or entrance is visible on the North-East and West sides, while the fourth or South side is occupied by a range of farm buildings. These have apparently been built of materials from some ancient building, as parts of armorial bearings, figures, and inscriptions were visible in the walls. The party were next conducted through the well-kept garden and hothouses. Attention was directed to the nesting boxes for small birds placed at intervals along the garden walls. Most of these boxes were occupied by young families of Tits, of several species. Boxes for the Starlings are also placed on tall poles and on all the windows of the old Tower. As a result of the accommodation and protection afforded them the birds do a great amount of good, and the gardener stated that no caterpillars or other insect enemies ever troubled him. It would be well were Mr Jackson's example more generally followed ; we would then hear less of the failure of so many garden crops through the attacks of insects. Entering the Mansion-House, Mr Jackson showed his visitors some very valuable relics of Robert Burns. The first was the original MS. of "Wat ye wha's in yon toun," written in his exciseman's notebook, of the same pattern as is still used. There were also some entries of grocer's stock-in-trade which the poet had taken down on the same day in which this song was written. The next was the poet's own copy of the Edinburgh Edition, and this was examined with a reverential interest. Almost every page was occupied with notes and corrections in his own

handwriting, the names of persons mentioned in the poems, which had been left blank, being all filled in. Mr Jackson also exhibited a fine mahogany model of the Sarcophagus in the Great Pyramid of Ghizeh, and stated that, according to the measurement of the model, which was guaranteed to be correct, Professor Piazzi Smith's theory, that the Sarcophagus was a measure of capacity, was found to be disproved.

A visit to the large Camp on the summit of Barshell Hill still remained to complete the programme for the day, so, under the guidance of Mr Jackson's gardener, the party set off and reached the hill top to find the rain descending in drenching showers. Under these circumstances the examination of the Camp was made as brief as possible. Some doubt was expressed as to its makers, and it may perhaps have been occupied successively by Britons, Romans, and Norsemen. However, it is in a very complete state of preservation, is of very large extent, quite circular, encompassed with two deep and wide trenches, and at one period must have been a place of no small strength and importance. Much regret was expressed at the state of the weather, as the greater part of Dumfriesshire and Galloway can be seen from the Camp on a clear day.

The Third Meeting was held at Colvend on the 7th of July, when a party numbering 17 left Dumfries by the 8.32 a.m. train to Dalbeattie, whence a 'bus conveyed them to Colvend Manse. Here they were met by the Rev. Mr Fraser and some other members, thus augmenting the party to the number of 20. A visit was first made to Mr Fraser's Garden, which was then in full beauty. For hardy plants the Manse Garden is probably unequalled in Galloway; a numerous assemblage of the choicest and rarest Alpine and herbaceous plants have been gathered together, and are as luxuriantly healthy as if still in their native habitats. The party next proceeded to Douglas Hall, where, leaving the 'bus, a general scramble along the shore and the rocks began. The *Samphire*, *Crithmum maritimum*, was noticed high up on the cliffs, but no one cared to risk life and limb for its possession,

and the botanists had to be content with a few small pieces, knocked down with stones. The most of the party entered the Piper's Cove, and traversed it for about an hundred yards, but lights having gone out they had to desist from further exploration, without having noticed anything worthy of mention except *an unmistakeable odour of whiskey—perhaps* a relic of the old days of the smuggling fraternity. Passing onwards, the Rock Rose, the Sea Pink, Sea Campion, Ragged Robin, Rock Saxifrage, and Cranesbill were noticed growing in boundless profusion, and adorning the rocks with gorgeous masses of colour. Many ferns were also noted, the Sea Spleenwort being of course plentiful, but although careful search was made, the Royal Fern was not found, and it is now supposed to be extinct in Colvend. At Port-o'-Warren, that peculiar plant the Sea Radish (*Raphanus maritima*) was found, and further on the rare *Astragalus glycyphyllus*. On the top of Castlehill some fine specimens of the stately Mullein (*Verbascum thapsus*) were secured by Mr Shaw; and near to Rockcliffe no less than four species of roses were gathered—*Rosa canina*, *R. rubiginosa*, *R. spinosissima*, and *R. pimpinellifolia*. Several of the less common birds were noticed during the walk—among them, however, the Peregrine Falcon was conspicuously absent. This noble bird had an eyrie near Port-o'-Warren, but of late years it is supposed to have been destroyed. The preservation of game has led to a serious disturbance of the balance of Nature by the almost total destruction of so-called enemies, thus allowing others to increase to an extent prejudicial to many interests. We may instance the enormous flocks of wood pigeons, which now make a living on the farmers' crops, and the vast swarms of field mice, which have appeared in many parts of the country, and which are so destructive to young plantations and upland pastures. From an agricultural point of view, birds of prey are not only quite harmless, but absolutely necessary for keeping other birds from increasing out of all proportion to their place in Nature. A breeding-place of the Herring Gull was very interest-

ing, but a nearer acquaintance with their nests and eggs was impossible, as these were placed high on precipitous rocks, quite out of reach of ordinary nest-hunters. Several pairs of the lesser black-backed Gull were also seen nesting with their white-winged congeners. Wheatears, Whinchats, and Stonechats, together with a few Mountain Linnets, were also numerous, and a pair of the Ring Ouzel were seen. The day being so bright and hot, insects were abundant. A specimen of the Clouded Yellow Butterfly (*C. Edusa*,) was secured after a prolonged chase; other two were seen, but owing to their proximity to dangerous precipices, their capture was not attempted. Among other Lepidoptera, the Artaxerxes Butterfly, the Blues, and the Little Heath were gambolling about in merry groups; and dancing hither and thither like a winged jewel was the Burnet Hawk Moth (*Zygeana filipendulæ*) clad in a vest of brilliant green and crimson. Mr Lennon captured the following Beetles along the shore:—*Elater halteatus*, *Altrous rhombiros*, *Dashillus cervinus*, *Cistela murina*, *Otiorhynchus sulcatus*, *O. ovatus*, *Ernobius abritus*, *Trachyplocus scabriculus*, and *Lerna puncticollis*. After a short halt at Rockcliffe, the return journey was commenced, and not a few members of the party were glad to find themselves seated, the rough scramble among the rocks, and up to the more accessible ledges, having resulted in a plentiful crop of abraded and contused wounds. A visit was made, in passing, to see the granite quarries of Oldlands, but as the workmen had left, a vein of Kaolin, which it was reported had been recently discovered, could not be seen. However, Dr Gilchrist very kindly pointed out the chief features of the rocks, which have been all rounded and curved from glacial action. Arrived at Dalbeattie, there was just time, before the 6.30 p.m. train was due, to see through the Granite Polishing Works of Messrs Shearer, Smith, & Co., where the appliances for polishing and cutting the huge blocks were matters of great interest.

The Fourth Meeting was fixed for Newabbey and

Criffel, and took place on August 4th, when the party, which included Mr Adam White, so well-known for his long connection with the British Museum, started at 9 o'clock a.m. in a waggonette from Dumfries. The ascent of Criffel was made from the farm of Ardwall up a short but steep side. After an hour and a-half of arduous climbing, the summit was reached by the foremost of the party, followed at short intervals by the remainder, as their strength permitted. A thorough search for insects and plants was made on the top, and for the former was very successful, upwards of thirty species of beetles being found under the stones—many of them very rare. Butterflies and Moths were, however, very scarce, owing to the cold wind blowing across the summit. Further down, a few specimens of the Mountain Carpet Moth were got, and numerous *Crambidæ*, a genus of little moths very common in wet summers. Before descending, a short rest was taken, and the party had now time to look on the vast expanse of sea and land spread out before them. Looking like a mere speck, the town of Dumfries was seen away to the north, and a long line of silvery white showed where the Nith flowed for many a mile. To the eastward, the town of Annan was distinguished by its canopy of smoke hanging above it, and down the English coast were many a town and hamlet similarly crowned. The Solway Firth lay without a ruffle on its broad bosom, dotted here and there with large fleets of fishing-boats. Towards the west the view was still more striking, the more picturesque points being well known to most of those present. The coast of Colvend was of especial interest from having been the scene of last meeting, and several of the points were distinctly recognised. Nearly the whole of the Galloway coast and all the higher mountains of the range known as the Southern Highlands, were in the prospect; on the southern horizon the outlines of the Isle of Man could be made out, but the day was not bright enough for a clear view of it. A descent was made on the western side of Criffel into the deep glen formed by

the Glen Burn. Several deep ravines were passed on the way, apparently formed by the little streams which were then harmless enough, but in winter must be raging torrents. In some places the streams sink into the hillside, to reappear again a few hundred yards further down. In this way a subterranean passage is made, which gradually widens, until, after some heavy rainfall, or when the snow melts, the whole of the mass of rocks and soil is burst open altogether, and a ravine formed. Such geological changes do not require a period of vast antiquity, but may be witnessed almost every year on such a mountain as Criffel. On arrival at New-abbey, the beautiful old ruins of Sweetheart Abbey were inspected, and some fine plants gathered within the old walls. Mr Gooden gathered the following plants on Criffel:—*Narthecium ossifragum*, *Drosera anglica*, *Rhyncospora alba*, *Erica cinerea*, *E. tetralix*, *Galium saxatile*, *Thymus serpyllum*, *Tormentil officinalis*, *Polygala vulgaris*, *Pinguicula vulgaris*, *Juncus articulatus*, *Euphrasia officinalis*, *Hydrocotyle vulgaris*, *Pimpinella saxifraga*, *Nardus stricta*, *Eleocharis pauciflora*, *Pedicularis palustris*, *Eriophorum vaginatum*, *Vaccinium myrtillis*, *Orchis maculata*, *Gentiana campestris*, *Myrica gale*. In Sweetheart Abbey he collected—*Polygonum aviculare*, *Ethusa cynapium*, *Jasione montanum*, *Stachys betonica*, *S. sylvatica*, *Teucrium scorodonia*, *Geranium molle*, *Conium maculata*, *Polygonum bistorta*. The beetles collected by Mr Lennon were as follows:—*Notiophilus palustris*, *N. substriatus*, *N. rufipes*, *Carabus violaceus*, *Leistus rufescens*, *Calathus piceus*, *Pterostichus lepidus*, *P. vitreus*, *Harpalus ruficornis*, *Patrobus assimilis*, *Trechus socialis*, *Hydroporus tristis*, *H. neglectus*, *H. umbrosus*, *Colymbetes bistriatus*, *Agabus paludosus* *A. nitidis*, *Philhydrus nigricans*, *Helophorus dorsalis*, *Quedius lœvigatus*, *Leptacinus butychurus*, *Multhodes marginatus*, *Colymbetes cupreus*, and *Donacia comari*, besides a number of commoner species.

The Fifth and last Meeting of the Summer was held at Thornhill on 1st September. Proceeding to the Museum

the party was welcomed by Dr Grierson, and shown over the grounds, where are gathered together a vast number of rare and curious plants, some of which are quite unique. "Mount Ararat" stands in the west portion of the garden, and a winding pathway leads to the regions of perpetual snow—an effect produced by layers of white quartz rocks. At various heights are growing the special groups of plants peculiar to a mountain region, the whole giving a very good idea of Alpine Botany. Various old Urns, Crosses, and Querns are placed here and there throughout the grounds, and have a very peculiar effect. An old Elm stump was pointed out as having a curious history. For more than four hundred years the tree grew in the bed of the Marr Burn; the stream had gradually undermined and hollowed out the stem, till, after a night of storm and flood, the tree was uprooted and overturned. It was taken to a woodyard, where it was cut up, and the stump lay there for upwards of a year. It was ultimately taken to the Museum, and now, from the base of the old stump, a number of young branches have grown and apparently mean to flourish. Within the Museum itself a whole day might have been profitably spent, but a hurried glance was all that could be spared. After a few hours' examination of the wonderful collection of subjects in every branch of Natural History and Art which are here contained, the party proceeded to Eccles House, the residence of Dr Sharp, who very kindly showed the visitors his famous collection of beetles. It numbers more than 100,000 specimens of nearly 30,000 species or distinct kinds. They are contained in boxes of a pattern known as book-boxes, and are arranged round the sides of a large room, much in the same way as the books and shelves of a library. A small ivory label on each shows the name of the family or genus to which the contained insects belong, and reference is thus easily made to any particular species which may be under study. The collection of British Beetles is almost complete, very few of our native species remaining to be added. Compared with the brilliant green, golden, purple, or crimson

armour of the foreign ones, they are an insignificant-looking lot ; but what they want in size and colour is amply compensated for by the beautiful anatomical structure of the small species. Many of the exotic varieties are of great value, and in the beetle market would fetch almost as much as jewellery, to which in beauty, colouring, and delicacy of form and structure they are no mean rivals. The strange uncouth forms, sharp, hornlike, offensive, and defensive appendages, hooked and spiny limbs, were a matter of wonder to all. The party, after looking over numerous boxes and their interesting contents, getting a pretty fair idea of the great assemblage of insects known as Coleoptera, went to see some of the grand old trees which are so profusely scattered around the Mansion-House of Eccles. Prominent among them stands a noble Beech which might shelter a regiment under its wide-spreading branches. Its circumference round the extremity of the lowest branches is 110 yards. Its trunk at three feet from the ground measures $21\frac{1}{2}$ feet in girth. A circle of branches, each of the size of ordinary trees, springs from the main stem at from 4 to 7 feet from the ground, with an average girth of 7 feet. The number of cubic feet of timber must be enormous ; but owing to the want of time no calculation was made. Another tree that at once commands attention is a Walnut,* now sadly riven by many a winter's storms, but enough of it remains in health and vigour to make it one of the largest of its kind. Dr Sharpe stated that he had seen very few to equal this one in size, even in Spain, its native country. On the right of the avenue a very fine Roman Camp was visited. It is of the usual square form, and the ditch or fosse is in a very good state of preservation. It is worthy of remark that, contrary to the case in regard to other Roman Camps in the district, no relics of its founders have been found near this one. A short walk further brought the party to Nith Bridge, where Dr Grierson told the story of its erection. It appears that

* It is to be regretted that this noble tree fell a victim to the great storm of 14th October, 1877.

about one hundred years ago the Nith was here crossed by a ferry boat, and it seems the ford was a dangerous one, from there being a cross erected a short distance off, which still remains, protected by an iron railing. These crosses were in olden times always erected at places of danger and difficulty, such as mountain passes and fords. Well, at that time, a party returning from Dalgarnock Fair, then one of the most important in the district, found the Nith in full flood, but determined to cross at all hazards. The party numbered six, and just as they were about to move off a tall man in black clothes stepped into the boat, which was shortly swamped and all its occupants drowned. The bodies were all recovered except that of the unknown personage, who was supposed to have been the Evil One. This sad accident roused the district to the necessity of having a bridge built, and a subscription being set on foot the present structure was soon erected. This story was of peculiar interest, from one of our members who was present being nephew of one of the drowned persons.

FIELD MEETINGS OF 1878.

The First Meeting was held at Lincluden and Holywood on Saturday, May 4th, when, although the weather was most unpromising, fourteen members attended. The party left Maxwelltown about eleven o'clock, and the first place visited was Lincluden Abbey. Mr J. Glover Anderson conducted the party round the ruins, pointing out the sites of the various buildings and pertinents which composed the ancient structure. He also directed attention to the peculiarities of the architecture which distinguish Lincluden, and also the uses and signification of several parts of the chancel. Some regret was expressed that nothing had been done to protect the ruins from mischievous youths and others, who apparently look on the ruins as a playground specially erected for their benefit. After a vote of thanks had been

passed to Mr Anderson for his instructive remarks, the party proceeded to Holywood Kirk, where a few hours were spent in looking up the old epitaphs and inscriptions on the tombstones. A good many of the tombstones are dated from the early part of the 17th century. The intelligent sexton pointed out some places where in digging graves he had come upon traces of the Abbey of Darcongal, which in ancient times stood on the ground now occupied by the churchyard. This Abbey was at one time a place of some celebrity. It is said to have been founded between 1121 and 1154. No trace of it now exists above ground, but the sexton remembers having been in the vaults belonging to it which are situated below the present stable of the Abbey Farm, close to the churchyard walls. In 1860, while digging a grave, he came upon the fireplace of the Abbey kitchen. Some of the ashes were given to local antiquaries, but the grate crumbled to dust on being handled. A short distance off, and at about a depth of three feet lower, a very beautiful piece of ornamented flooring was exposed. A memorial of the Abbey, however, still exists in two excellently-toned bells, which do duty in the belfry of the kirk. They do not seem to have suffered much from the tear and wear and ding-dong of centuries. One of them bears the following inscription, which is quite legible:—IWFTEN ABBAS SACR ME FIERI FECIT AGOVICE,—and which was translated into “The Holy Abbot Iften caused me to be made.” The party were here joined by the Rev. W. Lytteil, M.A., the well-known philologist, whose work on place-names entitled, “Landmarks,” is a standard one on the subject, and from whom a large amount of information was derived regarding the names of places in the surrounding district. The Druid’s Circle on the farm of Kilness was next visited. It consists of eleven large boulders (tradition says there were twelve at one time) arranged in the form of a Druidical temple, enclosing a space of ground about eighty yards in diameter. Mr Lytteil was strongly of opinion that the Druids had never had any connection with it. However, the generally received

opinion is that the circle was connected with a grove of oak trees which seems anciently to have stretched away from the spot six or eight miles north-westward into the parish of Glencairn, and this sacred grove, this "holy wood," is said to have given its name to the parish. The botanists present, although remarking a very noteworthy difference in the appearance of vegetation from what it had at the meeting held at same time last year, attributable to the genial weather of this spring, did not find any rare plants. Some insects were secured, amongst them being the scarce *Incurvaria muscalella*, and a remarkably small example of *Pieris Napi*, less than an inch broad across the expanded wings.

The Second Meeting was held on June 1st, when the places visited were the classic "Braes of Dalwinton" and their charming surroundings. To her votaries Nature extended her warmest welcome in sunny smiles, rendered all the more conspicuous and enjoyable by aching recollections of wintry weather lingering in the lap of May. Early summer had just commenced to unfold her treasures, and there was not that detracting profusion so characteristic of the later months, but nevertheless a fair number of specimens, both entomological and botanical, were obtained in the intervals during which the more enthusiastic of the collectors were able to withdraw their attention from the delightful scenery with which they were environed. Mr Lennon was especially fortunate in securing specimens of the rare *Corymbites holosiriens*, *Harpalus tardus*, *Phyllobius verdicollis*, *Haltica longicollis*, *Crepidodera helxines*, *Sharederma testacea*, and *Podogrica fucipes*, while Mr Goodon either collected or observed in flower the following species:—*Anagallis arvensis*, *Anchusa sempervirens*, *Euphrasia officinalis*, *Geum rivale*, *Lysimachia nemorum*, *Polygala vulgaris*, *Pinguicula palustris*, *Ranunculus aquaticus*, *Sherardia arvensis*, *Valeriana dioica*, *Veronica becabunga*, *Allosorus crispus*, *Gallium montanum*, *Gnaphalium dioicum*, and *Menyanthes trifoliata*. The party, on arriving at Auldgirth per the 12.30 train, immediately commenced the ascent of

the Moloch Hill, and for the earlier portion of their climb had to wade through a luxuriant growth of the parsley fern, which spread around them for acres. From the summit one of the most magnificent scenes which Nithsdale or the South can boast of lay at their feet. The frequent but foolish wish that "they could be there and look at it for ever" was felt and uttered, but the party descended nevertheless, and proceeded up the burn towards Dalswinton, Dr Gilchrist securing some remarkably fine geological specimens on the way. Dalswinton Castle, to the site of which the present mansion stands in close proximity, belonged to the family of the Comyns, and must have been a fortress of considerable importance as early as the time of Wallace, who is reported to have reduced its English garrison by a strategy similar to that by which Sanquhar was captured, and tradition also mentions it as his resting place on the night following the memorable engagement in which he totally routed the English near by. Caerlaverock has better claims to this honour, however, and the story is probably only another example of that hero-worship accorded to the patriot by the Scottish peasantry, and which is manifested by the existence of a similar legend regarding every place he was ever within a reasonable or unreasonable distance of. But the Castle is possessed of considerable historical interest, from the fact that within its walls were concocted the famous letters which, falling into the hands of Bruce, revealed to him the treachery of Comyn, and which contributed so much to the cause of Scottish liberty, for had Bruce not become possessed of them the dark scene in Greyfriars' Monastery would never have taken place, and the battle of Bannockburn never have been fought. The Loch was next visited. Apart from the beauty of its features, natural and artificial, much interest centres in it as the cradle of the steam-boat, the first vessel propelled by steam having been launched here by Mr Patrick Miller, the then proprietor, and Mr James Taylor, his collaborateur in the invention, on the 4th of October, 1788, the experiment causing such general interest that the shores of

the beautiful little lake were crowded with spectators, whose surprise at its complete success can be easier imagined than described. A feature of great interest at the loch is the heronry, where several couples of these birds are preserved by the proprietor, Mr Leny, whose sedulous care in the preservation of the various wild birds frequenting the district is most commendable. On their return to the station the party found that two hours would elapse before the arrival of the next train, and split into two parties, one waiting upon it, the other proceeding by road to Dumfries, where all arrived about half-past eight.

The Third Meeting took place on Saturday, the 6th July, in the neighbourhood of Bridge of Dee. The morning was showery, and fears of a wet day no doubt prevented some members being present, but the day turned out one of the most pleasant description, the hot sunshine being tempered with intervals of shade and a cooling breeze. The party proceeded by the 8.32 a.m. train to Bridge of Dee Station, where they were met by Mr Grierson, of Keltonhill School, under whose experienced guidance they explored a large part of the district. The Botanical section of the Society mustered in strong force, but of the other sections the only representatives present were an entomologist and an antiquary, and these gentlemen, to avoid "isolation," wisely determined to co-operate with the botanists. The first plant of interest met with was growing in the hedge-side, not far from a dismantled cottage. It was a single white Rose, of a species not indigenous to Britain, and quite unknown to those present. Near the same place a hedge of Privet—a true British Olive, as Dr Gilchrist stated—in full bloom was scenting the air with its delicious fragrance. In the sluggish waters of a shallow stream were found some large patches of *Ranunculus aquatilis*, studded with pretty white flowers. Mr Shaw stated that the plant was scarcely known as a native of the Tynron district, and that more of it grew in this burn than he had seen all his life. Numerous species of Grasses were gathered on the farm of Threave

Mains, but nothing of special note. Near Threave Castle, a large extent of marshy ground, from which, as the party approached, rose flocks of Wild Ducks, and Herons, Snipes, Sandpipers, and other aquatic birds, was next explored, and a number of plants found. The wetter portion was covered with a strong growth of the Bottle Carex, amidst which a white variety of the *Cardamine pratensis* was not uncommon. A great floral treat awaited the party at a small, black, deep pool, on whose waters floated a quantity of the *Nymphaea alba*, the exquisitely beautiful white flowers presenting a most charming contrast to the black water. At considerable risk of a "ducking," as many flowers were gathered as formed bouquets for all present. Near the edge of a muddy bay formed by the Dee the graceful little *Lobelia dortmanna* and the queer-looking *Alisma ranunculoides* were noticed, and a number of specimens secured by Dr Gilchrist and Mr Grierson, who waded in for them. A thicket of *Scirpus lacustris*, over six feet in height, was growing near the same place. On dry banks near at hand was a plentiful growth of the Lilac Devil's-bit Scabious (*Scabiosa succisa*) intermingled with which was the Sea Plantain (*Plantago maritima*) in flower. It was explained that the plant grew away from the neighbourhood of the sea only where the soil contained potash. The party next proceeded across the well-known stepping stones to the island on which Threave Castle is situated. At the edge of the Dee a bed of a pretty little plant (*Helosciadeum inundatum*) was seen, the flowers of which are remarkably tiny and white. The party were not disposed to examine Threave Castle from an antiquarian point of view, so a brief stay only was made. A large plant of the Hemlock (*Conium maculatum*) almost fills up the hole in the west wall made by the shot from Mons Meg. Ferns were very abundant in the crevices, the whole of the eastern wall being covered as high as the eye could distinguish it by a dense growth of the *Asplenium ruta-muraria*, *A. adiantum nigrum*, *A. trichomanes*, and two or three others were also found. The north

wall of the castle is of a dirty greenish yellow caused by the growth of a Lichen (*Lichenora parietina*) on the stones. This plant only grows on a northern aspect, consequently none of it was found on the other walls. On returning across the Dee a great number of fresh water sponges were noticed on the stones—a curious little species about the size of a shilling, and a quarter of an inch thick, of precisely similar texture to the sponge of commerce. The next place visited was Kelton Hill, the scene of the famous fairs of the olden time, and from the top of it a splendid view of the surrounding country was obtained. After a short rest in Mr Grierson's residence, where they were shown some antiquarian relics—amongst which were a broadsword, which last saw service on Culloden Moor, and some granite balls, measuring from 5 to 8 inches in diameter, numbers of which were found round the walls of Threave a few years since—the party went on by the Kirkcudbright road to the Billie's Glen. A fine patch of *Geranium pratense* was found on the wayside, and a nice white variety of *Valeriana dioica*. A small burn-side was covered with the poisonous Water-hemlock, and further up grew plentifully the common Butter Burr, which is very local in the district. The Glen would have repaid a much more minute search than could be made. However, some good things were secured. The common Dog's Mercury covered almost the whole of the interior of the Glen, and on the ledges of the rocks were numerous patches of the pink-flowered grass, *Melica uniflora*. Mr Grierson pointed out a place where earlier in the season that curious little fern, the Moonwort, grows in thousands, but it was then, of course, too late for it. A mine once sunk in expectation of finding lead was pointed out. It is sunk about 30 yards deep into the east side of the Glen, and the entrance is through a very fine natural arch, which one of the party sketched at the request of Dr Gilchrist. In the field above the Glen some bare rocky knowes were covered with masses of the little white *Sedum anglicanum*. On others were found the Rock Rose the blue *Jasione montana*, and the Wood

Moneywort (*Lysimachia nemorum*). In a boggy place at the foot of the Glen a number of the rare Butterfly Orchis were secured, thus worthily finishing the gathering of the day. Altogether nearly a hundred species of flowering plants and grasses were found, leaving out of consideration such species as are of general distribution in the district.

For the Fourth Meeting, on August 3rd, so few members turned out that it was decided not to keep a record of what was done.

The last meeting, on Saturday, 7th September, was well attended. The party proceeded to Lochanhead by the 12.20 train for Hills Tower and neighbourhood. At the quarry on the north side of the station Dr Gilchrist pointed out the chief features of the Silurian strata, which dip westwards at an angle of about 70 deg., as elsewhere throughout the district. Above the quarry the Reindeer Moss was found, and further on the Grass of Parnassus was growing in the bog in great abundance. *Euphrasia officinalis*, the Eyebright, and *Pedicularis sylvatica*, the Red Rattle, were also found in company with other plants of less note. A deep ditch in process of excavation was examined by the geologists, but nothing but the usual features of the glacial drift was noticed. A short distance further brought the party to the Castle of Hills (or Loch Roiton, as it is termed by Grose), which is of little historical importance, but is of some interest to the archæologist, from the fact that it forms a connecting link between the old Scottish baronial peel or tower and the modern mansion. It combines the external features of the former with the more prominent characteristics of the latter; for although the walls are crested with frowning battlements, and the ground floor devoid of any nearer approach to windows than two or three small loopholes, the upper rooms are large, well-lighted, and airy, with many of the conveniences of modern life. The comparatively low and flat nature of the site of the tower precludes its forming a prominent object in the landscape, but, nevertheless, when viewed from a "vantage point" on the brae between it and the kirk, it forms a

striking and picturesque accessory, the upper portion standing out boldly against the blue waters of the loch, the piquancy of the roof and battlements rescuing from tameness and contrasting finely with the bare and less interesting portion below, while the gate-house, a perfect *bonne bouche* to the artist, nestles closely to its side, leading us irresistibly to think of the days when in it,

Above the gloomy portal arch,
Timing his footsteps to a march,
The warder kept his guard.

Nearing the castle, the visitor perceives that the building now forms one side of the farm-yard of the adjoining steading, a portion of one other side of the square being occupied by the remains of the old castle wall and the gate-house, the latter being the principal entrance to it, as it was to the courtyard of the castle. The lower portion is wholly occupied by the portal arch, which is surrounded by bold and effective mouldings, the beauty of which is sadly marred, however, by a tame and insipid label. The upper portion consists of the watchroom, from which the warder surveyed all visitors through two extremely small loopholes, with a view to ascertain whether their intentions were peaceful or otherwise, and presents an unbroken exterior with the exception of a small panel containing what has been called the Royal Arms of Scotland, although the bearings are somewhat different to those generally used, the middle chief, fess, and honour points being occupied by a hirsute individual crowned with a turban, and brandishing in one hand a dagger and in the other a sword. On this panel, Grose (according to his own statement) perceived the date 1598, but the visitors on this occasion, in common with all others who have visited it from the time of the redoubtable Captain to this, have utterly failed in their endeavours to make the discovery. The Castle proper bears upon its front, panels for openings for five coats of arms, but three only remain, and whether the other two bearings were ever fixed or not it is impossible to tell. Those still in existence are in good preservation; one, however, is

so obscured by an ash sapling that it is impossible to get a good view of it. The arms are (1) Maxwell of Hills; (2) Sir John Maxwell (Lord Herries); and (3) Edward and Agnes Maxwell. Entering the building we find ourselves in a small hall, flanked on one side by the door leading to the dungeon or ground floor, and on the other by a circular staircase, 3ft. 6in. wide, by which we reach the second floor, in which the joisting, &c., is still nearly perfect, but of the next floor only a few timbers remain. The storey consists of two rooms, and what has apparently served the purpose of our modern w.c., the larger rooms being well lighted with large ingoing windows, while the stone jambs, which are handsome in character, still remain. They are, however, comparatively modern. The next floor it is impossible to examine, so passing upwards the battlements are reached. These are 2ft. 6in. wide, and rest wholly on the wall, the parapet only being corbelled out, and are well secured from any accumulation of surface water by openings to large gargoyles of cannon shape, which, projecting from the walls, add much to its picturesque appearance. We may mention that the parapet is above the average height, the embrasures being three and the merlons four feet. A new roof has just been added by the proprietor, Mr M'Culloch of Ardwall, and much praise is due to him for his zealous care of the ruins, exemplified in this and in many other instances.

As we have indicated, the history of the Hills is extremely scanty. It is noteworthy, however, that Edward I. spent a night at the Castle or in its immediate neighbourhood, the note of his expenses connected therewith being in the Wardrobe Accounts. At that time, and until the fall of their House, the Tower was one of the numerous possessions of the Douglas family. It then passed into the hands of the Maxwell family, one of whom, Herbert, said to be an illegitimate son of John, third Lord, founded the now extinct house of Maxwell of Hills.

After the old Tower had thus been minutely inspected, the party next proceeded to Lochrutton, where one portion

went along the shore searching for plants, &c., and the others went to see the Water-Works. On the south shore of the Loch a number of interesting plants were picked up, but they were of the species usually found in such situations. The two parties again joined at Lochaber, whither they had gone by different routes across the fields. Some boggy places, quite covered with the lovely blue flowers of the *Scabiosa succisa*, were well searched for varieties of that plant, and white and rose-coloured ones were found. The rare Sundew, *Drosera anglica*, one of the family of flesh-eaters which has attracted so much attention from men of science during the past few years, was found close to the water edge, with the remains of half-digested insects still sticking to the viscid glands with which the leaves are covered. A bed of Lignite of great depth is situated at the north end of the Loch, and was examined very carefully. A number of the painted Lady Butterflies were flying about the hedge sides at Woodhead, and it is somewhat strange that this butterfly, so abundant this year, has not been seen in the district for the last eleven years. Nothing further specially interesting, with the exception of the Quarry in the Longwood, was met with, and the party reached Dumfries again shortly after six o'clock.

TRANSACTIONS.

The authors of the following papers are alone responsible for the opinions expressed:—

THE ORIGIN OF THE PERMIAN BASIN OF THORNHILL.

By JOSEPH THOMSON, Gatelawbridge.

Read 2d February, 1877.

(1.) SUPERFICIAL POSITION AND AREA OF THE PERMIAN ROCKS OF THORNHILL.

Those of you who have travelled through the middle ward of Nithsdale, in the centre of which Thornhill stands, will have observed that it is a small valley in itself formed by hills of Silurian rock, which surround it on all sides, and from which in a former era of the world's history it has been worn out by some denuding agent. At the bottom of this small valley lie the rocks which are to form the subject of our inquiry to-night. They extend a distance of 12 miles from the low-lying hills which bound the valley on the south to the mouth of the Pass of Dalveen—in fact the extreme length of the valley. A line running from east to west through Thornhill will lie along its greatest breadth, which is about 4 miles. That these rocks are referable to the Permian system is inferred from the following facts:—1st, They overlie the Carboniferous system unconformably; 2d, they are to a large extent identical with strata which unconformably overlie the Coal measures in Ayrshire; 3d, they are the same as those which, in the Dumfriesshire basin, pass southward under the Trias of Cumberland.

(2.) CHARACTERISTICS OF THE SYSTEM.

Perhaps few places in Great Britain present a more interesting development of the features which so peculiarly characterise the Permian strata as the little basin of Thorn-

hill, and when I say so I simply express the opinion of Professor Geikie, than whom there is no man more qualified to speak on the question. Confined as the rocks are in a small isolated place, we have everything so condensed, as it were, that nothing but the great characters which distinguish these rocks are brought out in bold relief. The Lake origin of the strata, the great volcanic outbursts of the period, the complete absence of any organic remains, and the red colour of the rocks, are all here seen or expressed in the very clearest of geological language. But as it will be utterly impossible to give anything like a comprehensive idea of the development of all these distinguishing characters in Upper Nithsdale in any paper of moderate length, I propose to draw your attention to-night simply to the origin of the rock basin in which those strata have been deposited.

(3.) GEOLOGICAL POSITION AND RELATIONS OF THESE ROCKS.

In pursuing our inquiry, then, it will be necessary, in the first place, to consider the geological position and relations of the Permian rocks of Thornhill to those underlying and surrounding them. The valley, as I have already said, is a great hollow cut out from the Silurian strata which rise up in the form of hills all round it. Lying along the whole western and southern sides is a stripe of rocks belonging to the Carboniferous Limestone Series. On the eastern side this stripe is more imperfectly developed; while here and there amongst the Permian rocks these strata also appear. On taking a section of these formations across the valley we find that they occupy the following relative position:—(a) We have the Silurian rocks with beds tilted vertically from east to west, across which the valley runs. They rise up on each side as low ranges of hills; (b) forming the basement beds of this hollow we have the Carboniferous rocks much in the form of a shell, having the central mass of the sandstone cut out, leaving unconnected parts on each side of the valley; (c) in the hollow thus cut out from the Carboniferous rocks we find the Permian sandstones situated. A section from

north to south would present the same geological features, being only a little more elongated.

A moment's consideration of the geological position of these rocks, as I have thus described it, cannot fail to show that they have been deposited in a completely isolated inland lake. This is, of course—independent of the direct evidence bearing on the case—what we might have expected, as geological theory generally tends towards a lacustrine origin for most of the red Permian sandstones.

(4.) THEORIES WHICH MAY ACCOUNT FOR THE ORIGIN OF THIS LAKE.

The question which we have now to consider is—What has produced this hollow or rock basin? There are only three agents which could possibly originate a lake basin, and these are (*a*) internal movement, (*b*) water, or (*c*) ice.

It could not have been the first of these, as there is not the slightest evidence, in this case, of either the upheaval or subsidence of the surrounding or underlying rock, and if either had taken place, signs of such movements must have become apparent.

Against water as the agent there are many objections of even a more decided nature than those against internal movement. We have, for instance, no recent example of water forming hollows at all; in fact, how could it? Water has only an excavating power when it is in motion. To move, it must have an inclination downward, or a force such as wind, to impel it. Consequently, the moment that a surface which is being denuded becomes horizontal, the motion must cease, and along with it of course the denuding power. Hence the impossibility of water forming a hollow. Motion in water produced by wind pre-supposes the existence of a lake or sea, so that the movements of water in that case could only extend the boundaries of, not produce, a lake. We are thus, so far as I can see, bound down to the last alternative, viz., an ice origin. Doubtless in the present state of geological knowledge, this ice theory is rather a

daring one, and if it rested merely on the grounds that we cannot understand how this hollow could be produced in any other way, it would indeed have rather a precarious foundation. Fortunately, however, there is evidence of a more positive nature, which goes far to substantiate it. Allow me, shortly, to draw your attention to this evidence, which we will consider under three heads—(a) ice as a lake-forming agent, (b) proofs of glacial conditions about the commencement of the Permian Era, (c) the favourable contour of the ground for the formation of a mass of ice.

(5.) EVIDENCE IN FAVOUR OF A GLACIAL ORIGIN.

(a) ICE AS A LAKE-FORMING AGENT.

By the great majority of our most eminent living geologists, amongst whom I need only mention Ramsay and Geikie, the theory is held that most existing lake basins were first formed during the Glacial Epoch, and were due not to elevation or subsidence, but to actual erosion by glaciers, in proof of which it is shown that lakes are exceedingly numerous in those countries where erratic and other signs of glacial action exist; and that they are comparatively rare in tropical and subtropical where no signs of ice action exist. That is to say that beyond glaciated countries lakes almost abruptly cease. This is a coincidence which could hardly be accidental, and the well-known erosive action of glaciers makes it all the more probable that they were the principal if not the sole agents in producing our present lake basins. Without, however, going so far as to suppose that even most existing lake basins have originated in this manner, it is sufficient for our purpose to understand that ice is a great lake-forming agent.

(b) PROOFS OF GLACIAL CONDITIONS DURING PERMIAN TIMES.

Passing now to the direct evidence bearing on the subject, let us consider, in the second place, the proofs of glacial conditions existing during the time when this basin was scooped out.

Of late years the necessity of assuming the action of ice to explain the anomalous characters exhibited by many strata in more than one geological system has become more and more apparent, until it is now held by most of our most eminent men of science that there have been various ice ages at different periods of the world's history. Among these ice ages there is one to which facts point very strongly as existing at the commencement of the Permian Era, the very time when this lake basin must have been formed.

On this question let us quote from two of our modern leaders in geology—Professors Geikie and Ramsay.

The former describes a singularly detached area of Permian breccia, between the villages of Leadhills and Crawfordjohn, in the following terms :—“This breccia,” he says, “has been entirely derived from the waste of Lower Silurian rocks. The stones are angular and subangular, often of a somewhat flat form, and vary in size up to a foot or more in length. They strongly resemble the form of stones in boulder-clay or moraine rubbish ; indeed, when the usual stratification fails to appear, and the stones have been thrown together irregularly, the resemblance to a glacial deposit is most striking. A careful search was made among them for striated stones, but without success.”

These facts evidently indicate very conclusively the existence of glacial action on the Lowthers.

In the *Geological Journal* Professor Ramsay speaks still more emphatically in favour of an ice age, to account for the origin of similar breccias found in the southern counties of England.

He founds his belief on the following formidable array of evidence :—“1st, The great size of the stones—the largest observed weighing three-fourths of a ton. 2nd, Their forms—rounded pebbles are exceedingly rare. They are angular or subangular, and have those flattened sides so peculiarly characteristic of many glacier fragments in existing moraines, and also of many of the stones of the pleistocene drift, and the moraine matter of the Welsh, Highland, Irish, and

Vosges glaciers. 3d, Many of them are highly polished, and others are grooved and finely striated like the stones of existing Alpine glaciers, and, like those of a more ancient date, scattered over various parts of the world. 4th, A hardened cementing mass of red marl, in which the stones are very thickly scattered, and which in some respects may be compared to a Red Boulder Clay, in so far that both contain angular, flattened, and striated stones, such as form the breccias wherever they occur. The contained fragments are all derived from the district, although some of them can be shown to have travelled a distance of 30 miles. Here, then, we have evidence of the most positive nature, taken from our own district as well as the south of England, which points most conclusively to the existence of glacial conditions at the very time when this Permian Basin must have been produced.

(c) CONFIGURATION OF THE LAND FAVOURABLE.

The next question to be considered is whether the configuration of the land was favourable for the accumulation and descent of a mass of ice by the erosive action of which the Permian Rock Basin we are considering might have been produced. To trace out this question satisfactorily we must transfer ourselves in thought away back to the Devonian Epoch. It is very easily demonstrable that during the earlier parts of this era the great stretch of Silurian strata, which extends over most of the southern counties of Scotland, sank deep into the bowels of the earth, from which it was re-elevated in a vastly altered condition. Its half shaly beds had been subjected to metamorphosing agents by which they were changed into greywacke ; and its former horizontal lines of stratification had been bent and contorted by pressure, and were now generally standing vertically. Immediately after its re-elevation it must have been subjected to an enormous amount of denudation, which resulted in the formation of all the great valleys that now exist in the surrounding counties ; in fact, all the great natural features of the South

of Scotland were moulded previous to the Carboniferous Era, a statement sufficiently substantiated by the fact that many of the hollows cut out from the Silurian rocks are occupied by strata of Carboniferous Age, a circumstance which could not have occurred in any other way. Among the valleys thus produced was the one which now forms the Middle Ward of Nithsdale, in which Thornhill is situated. During the earlier parts of this era (the Carboniferous) this valley, with the rest of the country, was submerged under a sea in which strata belonging to the Carboniferous Limestone Series were deposited. In the latter part of the same era the country was re-elevated, and presented the principal surface outlines which we now behold, and these outlines so far as they relate to Middle Nithsdale, I have already described. There is, however, a very important factor which must not be lost sight of in the consideration of this subject. I allude to the vast amount of denudation which must have taken place since Permian times, and which must have materially contributed in lowering the height of hills which surround the valley. It would be altogether out of the question to attempt to form any conception of the amount of this erosion, but if during one era whole valleys can be excavated on a large scale, surely during many eras greater results must have been produced. This is all the more probable when we consider that, since the Carboniferous Epoch, Scotland has been oftener above than below water, and consequently made all the more liable to be denuded by the usual agents—water and ice. We will not attempt to guess at the amount taken off the hills ; but I think we cannot go far wrong if we merely use indefinite terms and say a few thousand feet. Now, adding this unknown but undoubtedly large amount to the present very great height of the Lowthers and the smaller ranges which diverge from them to form the valley of the Nith, we would then have most favourable surface condition for the accumulation and descent of a mass of ice ; because, as you are aware, glaciers are an accumulation of snow (formed on mountains, if in the temperate region, or

even at the level of the sea, if in an Arctic climate) which has gradually assumed the form of ice. Like water, this accumulation has a tendency to pass from higher to lower grounds, its natural courses being the valleys which diverge from the mountains.

(d) CONCLUSIONS DRAWN.

Summarising, then, these various facts which I have brought before you to-night, we find—First, that we have a rock basin which must have been produced about the commencement of the Permian Era, the origin of which cannot be satisfactorily explained by reference to either igneous or aqueous agents. Second, that the following evidences point to the probability of a glacial origin:—(1) Ice is the most important lake-producing agent. (2) A very considerable mass of evidence collected by the most eminent geologists of the day supports the belief that there were glacial conditions at the commencement of the Permian Era, some of the evidence having been collected in our immediate neighbourhood. (3) During the existence of these glacial conditions the Lowthers formed a very considerable range of mountains from which minor ranges ran, forming the valley of Middle Nithsdale, in which the rock basin was situated, thus presenting favourable surface outlines for the accumulation and descent of a mass of ice.

With these facts before you I leave you to consider whether there is not great probability of a glacier having really been formed on these mountains during the time referred to, and of its having descended down through the valley, scooping out a rock basin in its passage, which became the lake in which the Permian sandstones of that district were deposited.

THE OCCURRENCE OF MELITÆA DIDYMA NEAR DUMFRIES. By WILLIAM LENNON.

Read March 2d, 1877.

It is with feelings of much pleasure that I take the liberty of bringing under your notice this evening the capture of a species of Butterfly, never before known, as an inhabitant of any portion of the British Isles.

To those of you who know something of Entomology, I need only state that this new species is one of the Genus *Melitæa*, and which has hitherto been found principally on hilly and wild uncultivated tracts of country. All the species of this Genus are distinguished by their chequered appearance, and have been named *Frittilaries* from their close resemblance to those out-of-date flowers, the Frittillary Lilies.

It is some years since I captured the specimen now brought under your consideration. It was about the end of the month of June, the day was very bright and hot, and this is distinctly brought to my remembrance from the unusually large swarms of *Argynnis Euphrosyne* and *A. Selene* which were floating around me, and of which I captured at the time a large number, most of which are still in my possession.

This new Butterfly has a great resemblance (outwardly) to those two species, viz., *Argynnis Euphrosyne* and *A. Selene*, amongst which it was caught. Indeed, its similarity in general appearance thereto is so great the probability is that, from this cause, it has hitherto escaped detection. For this same reason I was myself under the impression at the time that it was merely a well-marked variety of the common type, and, therefore, after casual observation, laid it aside together with my gatherings for the day.

Having at that date turned my sole attention to the study of *Coleoptera*, I did not return to the examination of these gathered specimens until a few months ago (November last), when on re-opening them this insect again commanded my earnest attention. On communicating thereon with our

Secretary (Mr Service), we together made minute examination of it, but after careful research could find no trace whatever of such an insect in any books within our reach treating of British Butterflies. We therefore determined on sending it for identification to the Entomological authorities in London. In due course we were favoured with a reply from the editors of "The Entomologist," desiring every detail in connection with its capture, and thereafter urging me to assure them of its being a *bona-fide* specimen caught in Britain. Having fully satisfied them in every particular connected therewith, the result of our correspondence has just been embodied in an article on the species in question from the pen of Dr Jenner Weir in last month's publication (February) of "The Entomologist," and it affords me pleasure in laying this journal now before you. And in conclusion, I have only to specify the exact locality of its capture, which was at Dal-scairth, to the left of the Dalbeattie Road, at the bottom of the plantation below the meadow. And let me further inform any of our friends now present who purpose devoting some of their time and attention to the study of Entomology in any of its numerous branches, that their researches at this particular spot are certain to meet with success.

A TRIBUTE TO THE MEMORY OF "RACKY."

By Dr GRIERSON.

Read April 6th, 1877.

More than six years have passed since there was brought to Thornhill Museum a little animal said to be a Raccoon, and it received the name of "Racky," but it was evident that it was not a Raccoon; its general aspect was not that with which I was in any way familiar. After consulting various authorities in Natural History, at length I was able to identify it with the Brown Coatimordi (*Nasua naurica*) of South America, an animal belonging to the family Viverridæ, of the order Carnivoræ. It was the Rev. Alex. Donaldson of

Strathaven who was the donor, and he stated that it had been brought from Para in the Brazils, and he had had it in his possession for about two months.

The size of the animal was somewhat that of a little dog, measuring from the tip of the nose to the root of the tail 19 inches, and the tail measuring 13 inches. The prevailing colour was chestnut brown, lightest on the breast and abdomen; the tail ringed, with lighter and darker shades; its legs were short, and the toes were provided with strong claws; it used its fore paws to lift its food. When it walked it set the sole of its feet upon the ground after the manner of a bear. Its ears were short and rounded; the eyes were placed unusually forward, and were nearly black; its prominent feature was its long nose; its teeth were small, but it could give a good bite, as at first I frequently experienced in my hands; its strength was in its arms. Almost every kind of food offered it was acceptable—bread and milk, potatoes, now and then a bird, slugs and worms, fruits in their season, was its bill of fare; of sweets it was passionately fond, and in the time for strawberries and cream it was highly delighted. It was not very susceptible of cold. In very cold weather it kept its den, which was in a box filled with fine hay; its power of generating heat was great, and it was always warm in its den. Its voice was confined to a chirp, loudest when excited. No great sagacity was at any time manifested. With myself it was familiar, but it was only with myself. Of late years it gave up the bad practice of biting me. Strange dogs did not much alarm it, and dogs generally were very shy of it, and never made an attack. With my own dogs it was quite indifferent; its mentalism seemed almost wholly directed to its food. Uneventful was its life, only now and then escaping from the place where it was kept, and occasionally getting hold of a chicken. It was always healthy and always had a good appetite. Even when its end came, it came without indications of sickness or disease. In the evening it had taken its food as usual, but on the morning of the 24th ultimo, when food was taken to it, it did not

appear. On examining its den there it lay dead, its body bent, and its little feet drawn together as it used to lie when asleep. Sleep on, though there was no kindred to mourn! Nature, from whom thou hadst thy birth, kindly again received thee, and has wrapped thee in her pall of oblivion!

COLIAS EDUSA IN 1877. By ROBERT SERVICE.

Read November 2d, 1877.

There is nothing in the whole range of Natural History of more interest than the study of the incessant changes which are going on from year to year among the plants, animals, and insects around us. Some species suddenly or gradually disappear, others appear to take their place, or those that are already present increase in an alarming manner, spreading their devastating hosts with startling rapidity over wide tracts of country. The Grasshopper Plague and Colorado Beetle of America are familiar recent instances of this most destructive increase.

But it is not of a change fraught with desolation and ruin of which I am about to tell you. Certainly the larvæ of *Colias Edusa* cause, I understand, an appreciable amount of damage on the Continent among clover and other Leguminous crops, but we may safely say this Butterfly will never become a noxious insect in our uncertain climate. I am sure most of you noted this golden beauty on the wing during the past season, and the thought no doubt occurred to those who do not make a special study of the insect tribes that it was surely a Butterfly they had not before seen. And, so far as this district is concerned, this supposition would be correct, in the case of our younger members at least.

This Butterfly has always been a favourite subject of speculation among Entomologists, from its peculiar characteristic of appearing only at intervals of many years in most parts of England. In Scotland it has hitherto been of excessive rarity. In some few districts of the extreme south of England

it is met with almost every year in less or more abundance. Further north it is found every few years, and in the other parts of the country it is only seen at rare intervals. In Scotland the first recorded capture was made in Arran in 1848, by Professor Sir Wyville Thomson. Four years later, one was captured near Largs, in Ayrshire, on 12th September, by Mr Birchall. The next, or third Scotch specimen, was secured at Kirkmahoe on August 17th, 1857, by our own Mr Gibson. I find that information in the volume of the *Naturalist* for 1857, and on the same page there is a particularly interesting extract from the *Dumfries Herald* of date September 4th of the same year, which I now read as follows:—

“The present season is very prolific in insect life. Seldom have we seen the Peacock Eye and Red Admiral in such abundance in this district. (It might be mentioned in passing that the former has not been seen here for about twelve years, and the latter, although unusually plentiful in Autumn, 1876, was represented this Autumn by a few stragglers only.) A specimen of the Clouded Yellow was captured a few days ago at Kirkmahoe, and on Tuesday seven more were taken, and a good many more seen near Glencaple. As there is only one recorded capture of this “Favourite of Entomos” in Scotland, we hope some of them may escape the ruthless net of the collector; and we may soon be able to look on it as one of our local species.”

A wish which was not gratified, however. In 1859 some were seen near Newbie, and in 1862 Mr Lennon took it in considerable numbers near Caerlaverock.

Since then no one has seen it in Scotland (so far as I am aware), but in Southern England it has been seen occasionally in fair numbers. It was in these circumstances, then, with feelings of no ordinary surprise and pleasure, that Entomologists greeted its great outburst this year. From even so far north as Orkney, where a solitary specimen was seen, to the southernmost point in England, it has appeared in almost every locality in more or less abundance. The Entomolo-

gical journals are crowded with notices of its unexpected occurrence, mostly accompanied with the remark "not seen here for five, ten, or twenty years," as the case might be. In our own district the first one was seen by Mr Gibson on 3rd June. Two or three days afterwards I was told that some yellow Butterflies had been seen at Priestlands and Mabie. Following that, Mr Lennon came with the startling intelligence that he had captured *Colias Edusa*. Then, on the 9th June, I was near the Newabbey road, early in the afternoon, when a Butterfly flew over the hedge and settled on a Dandelion flower. One glance was sufficient, there was *Edusa* glittering in its golden raiment, the first I had ever seen alive. There was an unwonted trembling in my limbs, and a thumping in my chest, as I advanced on the unconscious insect with the stealthy creep of a cat, hat in hand, for I had no other weapon. The aim was correct, *Edusa* was underneath, and quicker than ever it was done before, my coat was cast off and thrown over the hat to make all secure.

I need not tell you how head and shoulders were cautiously inserted beneath the coat tails, or how the passers by stared at the strange proceedings, and how one man turned away, as I bore off my prize in triumph, muttering with an expression of most intense disgust, "It's only a butterfly!"

However, I had soon an opportunity of seeing and capturing more of this beautiful creature, and had ample facilities of verifying the observation that "he who would capture *Edusa* in its lively flight has need of the seven league boots, with the hand of Mercury to ensure his success."

During June a number were seen, and a few captured, and over the whole of Galloway, excepting the higher portions, it was seen in fair numbers. At Arbigland it was almost equally plentiful with the Common Whites, and seems to have been plentiful along the coast fields as far as Auchencairn. Those who were at the Colvend Field Meeting will remember the three or four we saw then. During June it was seen also throughout Dumfriesshire. I believe

the flight continued from its first appearance on June 3, almost without interruption, until October 9th, when the severe frost probably destroyed them. For about a fortnight in August I did not hear of, or see any, but this was likely to be for want of observation. The undoubted Autumn brood commenced to fly about September 10th, and continued in remarkable abundance almost everywhere except on the high moors, till the frost destroyed them, as already remarked. Those places which came under my own observation were more especially a field to the east of Goldielea, another at Burnside of Mabie, and one near the Rifle Range at Conhuith. At these places they outnumbered any other Butterfly, and it is perhaps worthy of remark that in settling for food or rest they invariably preferred a flower of a yellow colour. My success in capturing was not in proportion to the numbers I chased. They are exceedingly difficult to catch, and had it not been that the Autumn brood were, as compared with the Summer ones, a peculiarly weak and enervated race, my show of specimens would have been small indeed. Even with this very noticeable weakness they were much more difficult to secure than other members of the Butterfly race.

A peculiarity of this appearance of *Edusa* is the remarkably early date on which it was first seen, viz., June 3d. It seems to have been generally understood hitherto that the species hibernated, appearing again in Spring, but I can find no record or notice of its having been then seen. I am at a loss to know how this idea can have originated; however, I think the experience of the past season will have dissipated the notion, for it is admitted on all hands that those individuals captured in June had only recently emerged from the pupa state. Another point which may be noticed is the greater size of the June specimens when compared with the Autumn brood. This peculiarity was accompanied by a stronger flight and a playful vivacity, which was altogether wanting in those that were on the wing during September. I find the average breadth of the Summer specimens is 2in,

4 lines, and the Autumn ones 2in. 1 line, thus showing a difference of 3 lines or $\frac{1}{4}$ inch. These measurements are from my own specimens, and might be somewhat modified if a more extensive series was examined.

Let us now briefly consider the various theories that have been put forth to account for the appearance of *Colias Edusa* after long years of absence. The first one is the famous "Blown over theory" of the late Edward Newman, which was that females were blown over by the wind from France, and that these females deposited the eggs which produced the next year's flight of Butterflies, thus establishing a colony that died out in a few years, again to be renewed in a similar manner. However applicable this theory may be to the extreme south of England, it will not account for the appearance of the insect in more northern localities. Another theory is, that eggs or pupæ lie dormant until forced into active life by influences of which we are yet ignorant. It may be mentioned here that apparently the weather has had no influence, for while in Scotland the season has been almost unexampled for cold and wet, the pasture fields in the extreme south of England have been quite scorched up with drought, still *Edusa* has been everywhere abundant.

On the Continent also, *Edusa* has been seen in much scantier numbers than usual, thus showing that the cause which has led to this abundance in our own country was in operation in Britain only. The "Clover Seed theory" is one which I think is entitled to more consideration than it has hitherto received. To understand this one it may be as well to explain that as the larvæ of *Edusa* feed on various clovers, the eggs are deposited on these plants, and that when the clover seed is harvested—which happens in August—the eggs become detached and mix with the seed, and are thus conveyed to this country if we require it, and ultimately sown in our fields. My reasons for viewing this theory (until another one is propounded) with favour are as follows:—During the Spring of 1876 clover seed of home growth was not to be had, owing to a failure of the

crops the previous Autumn. To make up the deficiency large quantities of Continental seed were imported principally from the countries bordering on the Rhine. This foreign seed was very inferior and badly cleaned, just such as the eggs of *Edusa* might have been conveyed in. Following up the chain of evidence, it seems very remarkable that the three places where I saw *Edusa* most abundantly were clover fields that had been sown out in the same Spring. I do not think I saw a single specimen in a field of older clover. Of course, in accepting this theory, we have an interval of 22 months to account for, during which *C. Edusa*, if brought among clover seed in the egg state, must have been going through its further transformations. It is possible a few imagos may have emerged in Autumn, 1876, but the Butterfly is so conspicuous that some one must have seen it. Failing that, it might be suggested that the eggs hatched in May or June, 1876, then, owing to the change to a colder climate affecting the development of the larvæ, they fed slowly all the summer, turning to pupæ in Autumn, and continuing in that state till last June. In this suggestion I do not see anything improbable, but really the question hinges on whether the eggs are tough enough to withstand knocking about in the clover seed without impairing their vitality. If that is so, then we may safely conclude that *Edusa* is always imported when there is a dearth of home-grown clover seed.

NOTES ON LINCLUDEN AND COLLEGIATE
CHURCH. By J. GLOVER ANDERSON.

Read 7th December, 1877.

The Abbey of Lincluden, one of the three Scotch houses belonging to the Benedictine Nuns, was founded about the year 1165 by Ethred De Macdowell, one of the earliest of the Lords of Galloway of whose career history has given us any trace. Succeeding to one-half of the dominions of his father, the munificent Fergus, upon the death of the latter in 1160, he married Gunild, daughter of Waldeof, Lord of Allerdale, and grand-daughter of the celebrated Gospatrick, Earl of Dunbar, the issue of the union being Ronald, fourth Lord of Galloway, whose son, Alan, the fifth Lord, was father of the pious lady Devorgilla, to whose munificence Dumfries owes her "Auld Brig," and by whom the local Abbeys of Wigtown* and Dulce Cor or Sweetheart, as well as the Franciscan Monastery at Dumfries, were founded. Attended by his younger brother, Gilbert (with whom he had shared his father's lands), Ethred was present at the battle of Alnwick, and taking advantage of the capture of William the Lion at that disastrous engagement upon his return to Galloway he threw off his allegiance to the Scottish Throne and drove from his dominions the agents of the Scottish Monarch. Notwithstanding this rebellious course he fought on the Scottish side in the internecine wars which attended the captivity of King William. Gilbert attached himself to the English forces, however, and obtaining the assistance of his southern friends ravaged the lands of Ethred, and making him prisoner put him cruelly to death in Lochfergus Castle, from whence his mangled remains are said to have been conveyed to the Abbey of Lincluden, where—in the lonely pile which he had helped to rear—he was stealthily laid in his "narrow home."

The Abbey of which this romantic tale is told has long disappeared, and it is thus a matter of some difficulty to

* The Abbey of Holywood is given in Mackenzie's list as having also been founded by Devorgilla,

determine the style of its architecture, whether the rude Saxon? the manly Norman? or the pure and lordly early English? To the former of these it has hitherto been invariably assigned. The date of its foundation, however, renders this extremely improbable, and even making a due allowance for a possibly backward state of Scottish art, in comparison with that of England, I find it hard to believe that it was not at least a Norman building, and if (as is stated by some of the highest authorities on the subject) the architecture of the two countries during the 12th and 13th centuries was precisely similar, the period at which the Abbey was built would be that transitional epoch at which the features of the sombre Romanesque had well nigh glided into the noble sublimity of Gothic art.

The history of the house down to the 14th century seems—as befitted its character—to have been uneventful in the extreme; but during the reign of Robert III. of Scotland the quiet dreams of the inmates were rudely shattered, and “fair Lincluden’s holy cells” rendered desolate by the violence of Archibald the Grim. Acting under a desire—real or pretended?—to uphold the purity of the Church, the doughty Earl, with an impecunious zeal which has only been equalled by that of the Scottish noblemen of Reformation times, contrived to oust the Nuns from their sacred residence and to appropriate the major part of their revenue. This transaction has been the theme of a good deal of discussion; but the question may now be said to have been definitely settled by the discovery at Dundrennan of what is in all probability the tomb of the last Abess of Lincluden. In the south transept of that Abbey there is a memorial slab measuring 5ft. 6in. by 2ft. 10in., having on it an incised figure, full size, or nearly so, in the garb of a Nun, with portions of an inscription in old English characters, and the date 1440. Scottish Nuns were bound never to leave their convent after having taken their vows, and the circumstance of a Nun’s grave being found in a monastery many miles from a Nunnery is therefore unique, and but for this

the sadly mutilated condition of the stone would probably have deterred any one from making an attempt towards its elucidation. The subject, however, attracted the attention of Mr Starke, F.S.A., Scot., one of the presidents of the last society, and he devoted a long paper to the subject with the result that the characters were found to be—

HIC JACET
DOMINA BLANCHEA
V. SIT
DOMINA PR QUONDAM.
OBIT ANNO. D. 1440.

Here lies
The Lady Blanche.
She was a Nun.
At one time a lady prioress.
She died in the year of our Lord, 1440.

Mr Starke, from the fact that there was no religious house for Nuns in the district except Lincluden, and from the similarity of the dates of the Abbey and the death of the Lady Blanche, argued that this, in all probability, was the tomb of the last Abbess of Lincluden, a conclusion which, if verified, would go far to clear away the slur cast upon the Nuns by the action of Archibald the Grim. Mr Starke does not seem to have been aware, however, of the similarity and close connection of the two Orders of Benedictines and Cistercians, for he remarks that the two orders differed entirely.* This being the only weak point in his argument, with the light of this additional information it may be safely assumed that the Lady Blanche was the last ruler of the Benedictine House of Lincluden, her tomb being placed in the unusual position which it occupies, as a vindication of the character of the Nunnery, and a testimony against the rapacity of the house of Douglas.

However reprehensible may have been the action of the Grim Earl in this matter, to him must be assigned the credit of founding the Collegiate Church, with the

*The Benedictines followed the rule of St. Benedict, whose order grew so large, that in the year 1098 Robert Abbot of Molesine, with a few of his Monks who were desirous of observing the Benedictine rules in their original severity, founded the Order of the Cistercians. The two bodies sprang thus from a common source, and followed a common code of laws. A high degree of friendship therefore existed between them, a friendship which grew all the stronger as the two bodies grew older, and the latter renounced the authority of their original rule.

ruins of which every Dumfriesian is familiar. When in good preservation the buildings must have formed a magnificent group; even yet they occupy the first place among the religious buildings of Eastern Galloway, a district which possesses a galaxy of monastic ruins such as few portions of Scotland can boast of. Standing, isolated from men's busy haunts, out on the narrow nook where Cluden's wimpling waters meet Nith's hurrying stream, the noble chancel, nestling closely by the side of the guardian Tower, which, even in decay, bears itself proudly aloft as if in full consciousness of the supreme beauty of its charge; the transept worn and dismantled; the nave now well nigh disappeared; the smooth parterre and the pine-tipped calvary form a group well worthy of its classic associations with Scotland's greatest bard, and of the muses of a Macdowall, of a Walter, and of a Sharpe.

The Benedictine House of Lincluden ceased to exist in the latter part of the reign of Robert III., and shortly afterwards the Collegiate Church was founded. To what extent the original Abbey was allowed to remain at its erection it is impossible to tell. It is highly probable, however, that such portions as were serviceable were converted into a residence for the Provost and Canons, the portion of the building known as the Provost's residence being erected at some subsequent date, for apparently the Church and Sacristy or Vestry were all that were erected by Archibald the Grim, the other portions being in a totally different style. The Church, as originally constituted, is said to have been composed of Chancel, Nave, and Transepts; but of these the Chancel, South Transept, and a portion of the south wall of the Nave only remain, the North Transept, if it ever existed, being totally lost. From a careful examination of the indications of the present building, however, I have come to the conclusion that the Nave proper (and North Transept probably) never existed, and I may briefly state a few of the principal reasons which induced that belief. 1st, Total absence of groining on the north side, what has manifestly

been the termination of the Nave Arcade. 2nd, The Chancel as it stands is a totally independent building ; and 3rd, In the event of a Nave having existed and a congregation assembled, not one-twentieth of those present could see anything in the interior of the Chancel. 4th, No necessity for the existence of a Nave under the foundation.

Regarding the first of these reasons, little need be said. The terminating pier of the Arcade abuts against the east wall of the Transept, and stands about 11ft. out from the line of that of the Nave. On the side next the Transept there may still be seen in good preservation groining corbel, shaft, and the lower courses of the ribs, while on the north side there is a total absence of such features. The second reason is perhaps a still stronger one, an open Chancel arch being of invariable occurrence, and if my theory of the non-existence of the Nave proper be not accepted, it would be difficult, nay impossible, to account for the existence of the west wall, which encloses and renders the Chancel a totally independent building. The third reason will commend itself to every one who has visited the actual building ; and with regard to the fourth it is only necessary to mention that Collegiate Churches were institutions founded solely to enable the patrons to get Masses said for the souls of their deceased friends, and were not for the accommodation of congregations.

The Church, so far as it was finished, was undoubtedly the richest work of architecture ever erected in the district ; for lofty solemn grandeur it may not have been able to compete with Sweetheart, but for pure, yet lavish decoration, there must have been few buildings in the South of Scotland worthy of comparison. The Chancel, as may be supposed, was the most elaborate portion of the building, containing as it did, the magnificent features of the Tomb, the Sedilia, the Piscina, and the Altar, not to speak of the doorway to the Sacristy, which, though of less moment, is still worthy of a place beside the others. The west, or entrance front, is, as mentioned before, a most peculiar feature, and exhibits

more than one object worthy of notice, even within the limits of this short paper. The first of these is the doorway, the straight arch of which is, so far as I know, unique in an English building of this style and date, although French examples are not unfrequently met with.* Above the doorway, on either side of the wall, is a carved corbel course, evidently built for the purpose of giving width for a rood screen. The figures are now so much mutilated that it is impossible to make out what they are intended to represent. They are, however (according to Pennant) designed to express the preparations for the burial of our Lord. Above the doorway as I have just indicated, was placed the rood screen, and by means of the hoodmould to the arch over we are enabled to perceive a curious twist in the wall above the level of the caps. The face of the hoodmould is flush with the wall on the south side. On the north it stands out 8 or 9 inches.

In the interior of the Chancel the greatest object of attraction would of course be the Altar, of which it is to be regretted there is now no trace other than three corbels from the east wall, which evidently supported the horizontal slab. They are 7ft. 6in. apart from outside to outside, so that the Altar would be something like 8ft. 6in. long. Above it stood an image, the bracket for which may still be seen on the cell of the eastern window; and on the outside was placed a buttress with pinnacle for its protection. Like most other statues in such positions it would most probably be painted to imitate life, and the costume brilliantly coloured and gilded.

On the left of the site of the High Altar may still be seen, though in a sadly mutilated condition, the tomb of Lady Margaret Douglas. The fragments that are still left, however, are fortunately enough to give us an idea of its surpassing beauty and richness of detail. Like most examples of 15th and 16th century date it consists of a deeply recessed

* It is worthy of mention that the Architect or "Master Builder" of the edifice must have been a foreigner—probably a Frenchman—for French features are numerous, and the contour of the mouldings precisely similar to many in Rouen Cathedral.

arch, forming a canopy above the base or actual tomb which was itself surmounted by a life size recumbent effigy. The base in this case was of such an elaborate character that it is entitled to rank with the altar tombs of the previous century. It stands about 4ft. high from the original floor level, but as the Chancel floor is covered with rubbish to a depth of 16 or 18 inches it is not seen to proper advantage. The intermediate portion between the cornice and plinth is divided into nine panels by a long arcade of as many trefoliated arches. Each panel encloses a shield; of these seven are enriched with various emblems of the house of Douglas, two remaining blank. The base, as I mentioned before, contained the actual remains of the Princess. These were enclosed by a plain slab, overlapping the front, and supported on the other three sides by a broad fillet, which still remains. On this slab lay the effigy. The outer mouldings of the main arch are boldly crocketed and terminated by a finial, and were originally stopped by rampant lions couched on the outer of the small shafts on each side. The inner mouldings run on to the impost, and the interior was originally partly filled with cusped tracery.

The tomb in general form was nearly square, and is enclosed on each side by buttresses with crocketed and finialed terminations, and on the top by a deeply undercut hoodmould, the hollow of which is filled in with carved foliage. The spandrels are filled in with panelled tracery. The Sedilia and Piscina are so similar to the tomb in general style and ornamentation that the description of the former applies in a great measure to them also. Mention may be made of the groined soffit of the sedilia, which is triple but not graded, and of the two minute niches in the interior of the Piscina. The base of the Sedilia is extremely plain, but that of the Piscina is ornamented by conventional representations of Acorns. In the north side of the Chancel, a few feet from the tomb, is a highly ornamented doorway which opened into the Sacristy* or Revestry, a chamber about 12ft.

* Archibald the Grim is said to have been buried in this vestry. See *Transactions of Antiquarian Society of England*,

wide, and groined in two divisions. The arched portion of the doorway is filled in with a tympanium, which, as well as the jambs and arch mould, is profusely decorated, the former with heraldic bearings, the latter with foliage.

The roof of the Chancel was well worthy of the magnificent objects beneath. The groining corbels, eight in number, were richly ornamented with shields bearing the arms of the house of Douglas, but it is to be regretted that they are now all undecipherable, with the exception of that on the north side next the doorway, on which can still be traced the arms of the Earl of Athol, and the motto—"Firth Fortune fill the fetters." In the whole of the groining appendages the filleted roll is the prevalent moulding, and more particularly in the shaft and ribs. Several of the highest courses of the latter are in an uncompleted state, for in many instances the mouldings are simply roughed out, showing clearly that the groining was never entirely completed. Above the groining there has evidently been a wooden floor, for there still remain six corbels on each side with corresponding voids behind which have apparently served as rests for the wooden girders of a double floor. Above this again was an ogee-shaped vault of stone, the lower portion of which still exists, and which was complete when Grosce visited the Abbey in 1789. Surmounting this second vaulting was the roof proper, composed of wood covered with lead or zinc. Access to the apartment thus formed above the Church was got by a circular staircase, the casing to which may still be seen between the Chancel and Transept, and from which there are doorways to the Nave and to the rood screen. The excessive care shown by the double vaulting suggests the use of the upper as a store for valuables or library. There is, however, no instance of a similar use for such rooms, and it is thus impossible to do anything more than hazard a conjecture in this instance.

The staircase is filled up with debris to a much higher level than the Transept or the surrounding ground, the door to the former being nearly covered up inside,

It is therefore impossible to tell whether or not the stair was continued down to the vaults. In any case there must have been another opening, probably before the High Altar, and on this means of access must be based any hope of exploration of the supposed subterranean passage between the Abbey vaults and the Castle of Dumfries. Instances of such secret passages are by no means unfrequent in mediæval buildings, but in many cases they have been lost sight of or forgotten. From their nature there is of course never any documentary evidence regarding them; but tradition, as in this instance, often speaks remarkably strong on the subject. Such being the case, it would be worth while to make a trial at least to open the vaults, and, if possible, set the question at rest.

The only portion of the building remaining to be noticed are the Transept and Nave, neither of which call for any lengthened description. It may be mentioned, however, that the former has been used as a side chapel, the remains of a Piscina being still in existence in the south wall, and what has probably been a credence bracket on the north side. The Collegiate Church of Lincluden, although it may not be associated like Dundrennan with any great historical event, has still a history at once interesting and locally important, and can boast of having received within its walls not a few royal visitors, and to have been once at least the meeting place of the lawgivers of the Western Border. Founded, as has been already mentioned, about the year 1400, the Church was the seat of the local Parliament which met in Dec., 1448, under the presidency of William, Earl of Douglas, to draw up a code of laws for the regulation of Border affairs, and twenty years later it formed a refuge for one of the ablest of England's Queens, Margaret of Anjou, who with her husband, King Henry VI., their infant son, and the Dukes of Somerset and Exeter visited Lincluden after the defeat of their forces at Towton on March 28th, 1461, being probably attracted by the fact that the then Provost (Lindsay) had been Scottish Ambassador to their court in the halcyon days when all England acknowledged their sway.

Eighty years after the visit of Queen Margaret, Lincluden was again visited by one of England's rulers, King James the First. Attended by the dazzling Duke "Steenie" and a large retinue, the King spent the night of the 2d August, 1617, within the walls of the "Auld College," the occasion having been evidently improved upon by some of his impecunious courtiers, for although the duties of the Provostry had been abolished for many years (mass being last said in the building in 1585) the office was continued until the date of His Majesty's arrival in the district, when the lands were conveyed to Mr Robert Gordon of Lochinvar and Mr John Murray of Lochmaben, two of the lords of the Bedchamber, the then Provost receiving the grant of a life-rent.

From the before-mentioned dates it will be perceived that Lincluden was not involved during the period of the Reformation in the common ruin and spoliation of all ecclesiastical buildings which had any pretension to architectural beauty, and it seems highly probable that upon the death of the last Provost it became one of the residences of the Maxwell family, for in the charters and correspondence published in the Book of Caerlaverock continual mention is made of it down till 1660. At what time it ceased to be thus occupied by them it is impossible to tell. Indeed, nothing further is known of its history until the beginning of the present century, when it became necessary to protect the ruins from the depredations of the surrounding peasantry, and the ruined wall along the east side of the road to the Cluden was then erected. It does not seem to have affected its purpose, however, for from then till now wanton destruction and desecration have been the rule.

Such then is a brief resumé of the history of this ancient house and a short account of its principal architectural features. It only remains to be added that its present condition is as unsatisfactory as it well could be, and that fresh injury is being done each day to the finest portions of the ruins.

NOTES ON A GLACIAL DEPOSIT NEAR THORNHILL.

By JOSEPH THOMSON.

Read January 4th, 1878.

During the formation of the branch railway line to Gatelawbridge Quarry from Thornhill Station, a deposit of a peculiar character was exposed in one of the cuttings. As far as can be gleaned from the Memoirs of the Geological Survey nothing similar occurs in Dumfriesshire, and—if my inferences be true—it will be found that a very important page of the later geological history of this country has been revealed by its discovery. This breccia—for so we may term it, as being both convenient and applicable—is overlain by a deposit of ordinary boulder clay, which covers all the surrounding country, and as a description of the characters of the latter will serve to bring out more prominently those of the former, we may take them both into consideration.

Extending along the east side of the Glasgow and South-Western Railway there is a ridge of a somewhat irregular contour which in Closeburn breaks up into great mounds and heaps, and which shades off towards Carronbridge. The greater part of it is composed of boulder clay, having as a backbone or nucleus the glacial deposit which forms the subject of this paper. The boulder clay has all the ordinary characters of that deposit. It is unstratified, forming a loose unarranged mixture of all sorts of materials derived from the neighbouring rocks. In one place it may be pure gravel, in another sand, or both may be mixed with clay. The drifted fragments of stone are principally greywacke, together with Carboniferous sandstones, Permian Porphyrites, and sandstones, or, it may be, even fragments of the underlying glacial breccia. They are all derived from local rocks; the boulders vary in weight up to two or three cwts., and are considerably rounded, polished, and striated. This glacial accumulation occurs scattered over the whole of Middle Nithsdale in confused heaps and mounds. Some six months ago, while the ridge was being cut through near Thornhill Station, a rock differing in many important

respects from the ordinary boulder clay was exposed beneath 15 feet of the latter.

In the first place it is distinctly and regularly stratified, dipping at an angle of about 30° due east ; secondly, it is a compact, solid rock, so firm and hard that in cutting through it dynamite had to be used oftener than the pick or the wedge. This character of itself is sufficient to stamp it as an almost unique case. Jukes, indeed, mentions the occurrence of a solidified glacial deposit in the south of Ireland, but in that case solidification had been produced by the solution and subsequent precipitation of the carbonate of lime forming the boulders. It is also not uncommon to find the boulder clay round a chalybeate spring hardened by the deposits of iron in the interstices of the deposit. Neither of these explanations apply, however, to the present case.

In the third place the boulders, sand, and clay are not mixed confusedly together, but lie in distinct layers forming beds of shale, sandstone, and breccia.

The contained fragments vary in weight up to 14 lbs. Many of them do not belong to any known rock of the district, while, again, fragments of local Permian and Carboniferous rocks are conspicuous by their absence. They are remarkably angular, frequently presenting as fine and sharp an edge as if newly broken by a hammer, and many of them are unpolished by erosion, and present no trace of striation. The beds of sandstone and shale are of insignificant thickness. The exposed section is about 400 feet in length, the beds dipping at an approximate angle of 30 deg., which would make their real thickness 100 feet, after making an allowance for one or two small faults, which bring the same bed twice to the surface. The beds are traversed by slickensided joints running north and south. The out-crop is extremely uneven, presenting evidence of having suffered a considerable amount of denudation previous to being covered by the overlying boulder clay.

These are a few of the main features of this glacial deposit, and as most natural objects contain their own history

we may proceed with some confidence to decipher it. And first, as to the origin of these two formations—It is very evidently vindicated that the boulder clay has not been deposited in water, while the underlying breccia has. To prove this I need only point to the absence of stratification in the former, and its presence in the latter; as well as the confused mixture of clay, sand, and boulder in the one, and their regular arrangement into beds of shale, sandstone, and breccia in the latter.

In the second place, it is equally evident that the stratified deposit has been transported by the agency of floating ice, while the boulder clay derives its origin from land ice. The great angularity of the boulders and their mode of occurrence in the case of the former, make such a theory imperative. It likewise accounts for the absence of boulders from local Carboniferous and Permian rocks, and for the presence of fragments of rocks which do not belong to the district.

As to the boulder clay, if it has been formed on land, necessarily it must be due to glaciers. In the third place we may proceed a step further in our reasoning, and say that subsequent to the deposition of breccia, and previous to that of the boulder clay, a considerable period must have elapsed during which Middle Nithsdale was raised out of the water, and suffered a great amount of denudation, nearly obliterating every trace of the glacial breccia, which must have covered the whole valley to a depth of more than 100 feet, as it is utterly impossible to believe that the icebergs got relieved of their burden always at one restricted spot.

With these detached fragments of past events, is there not a possibility of adding an interesting chapter to the physical history of Dumfriesshire? According to my deductions from these glacial deposits, the skeleton of such a chapter would read as follows, and I leave you to judge of the reasonableness of it:—At some very early stage of the glacial epoch Middle Nithsdale, with an unknown part of the surrounding country, was submerged under several

hundred feet of water. Somewhere or other high land did exist, the position of which may yet be traced from the erratics in the breccia.

Upon the higher parts of this land the climate was cold enough to allow of the formation of glaciers, which moved down through the valleys, their natural courses. Naturally, in their progress downwards, as in glaciers of the present day, rubbish of various kinds tumbled down upon them, and was carried off, the stones suffering little or no erosion from their position upon the top of the moving ice. These glaciers, when they arrived at the sea, which was not yet frozen up, would break off, carrying with them the rubbish from the sides of the valleys. In lower latitudes these would melt and, of course, deposit their burden, which would thus give rise to the glacial breccia which we have described.

After this had continued for some time a great change took place in the physical geography of the district—the submerged land once more changed to *terra firma*. Necessarily this land became subject to the denuding agents—rains, frosts, rivers, &c., which, as I have already said, nearly obliterate every trace of the breccia.

Glacial conditions were evidently not very severe at this time; perhaps there might even have been an inter-glacial warm period. After this state of matters had lasted for a long time conditions began to change. A glacial climate gradually came on, culminating in the formation of a vast sheet of ice, which in its motion produced the Boulder Clay.

Such are a few of the more important features of this interesting deposit. A more exhaustive study of its character may modify them to some extent, and, doubtless, will reveal many important facts which may throw further light upon the physical history of Dumfriesshire

THE RARER COLEOPTERA OF THE DUMFRIES DISTRICT. By WM. LENNON.

Read February 1st, 1878.

As is found to be the case with other orders of Insects, some Beetles are common everywhere, others common only in perhaps one particular field, a few are confined to a single spot of perhaps a few yards square, while some species are dropped on singly, apparently solitary strangers, who receive anything but what should be a stranger's reception, though none will dispute the joy their appearance causes in the breast of the fortunate collector. In consequence, perhaps, of their warm welcome (they are usually dropped into boiling water) these rarities may not be seen for years. In some instances I have seen only one specimen of particular species during 17 or 18 years. It is this uncertainty as to what may turn up that constitutes one of the principal charms of this interesting pursuit, and I have always found that when I had captured an insect unknown to me, I get into a "perfect fidget," as the saying is, to get home again and have it examined.

The order I have made my special study is the Coleoptera or Beetle tribe, and I may say that during the last 12 or 13 years I have searched almost every field, moor, moss, glen, and stream in the district, so that I may be allowed to speak with some degree of authority on the Beetle-producing power of the country immediately surrounding Dumfries.

Within a circuit of five or six miles I have found 1440 species. Amongst these there are of course a fair number of rarities, and others known to the "brethren of the Net and Pins" as "good things." Without further remarks I now propose to enumerate them to you. In the case now on the table, the species are placed in the order in which I mention them:—

The first, then, is *Dyschirus nitidus*, a very local species, which I have found nowhere else except on the salt marsh at Kelton, so that it is probably confined to places overflowed by the tide. The next is *Lebia crux minor*, one of

the very rarest of our British Geodephaga. I have only found it on the banks of Auchencrieff Loch. It is of exceedingly rare occurrence in Britain, not being known at all in many parts of the country. Another member of the same genus, *Lebia chlorocephala*, is a local insect, found only on the banks of the Cairn near Irongray Kirk. *Trechus longicornis* is very rare, being found only on Kelton salt marsh. *Haliphys striatus* is another rarity. I found it in one small pool in Kirkconnell Moss. I believe I have dredged all the other pools in Kirkconnell, but without finding this beetle in any other than the pool referred to. *Hydroporus obsoletus* is very scarce. I had the good fortune to be the first to discover this insect in Great Britain, but unfortunately was not scientific enough to be able to give a correct diagnosis of the species. Hitherto I have found it only at Kelton in refuse brought down by the floods. I am inclined to believe that it is brought down the river from far up amongst the hills. It occurs during summer after an extra high flood. It is also very rare on the Continent.

Hydroporus incognitus is another local insect found in a deep moss-hag near Gasstown. No other locality is known to me.

Myrmedonia collaris is rare, and one of the beetles found at Kelton after high floods.

Homalota littorea is, as its name implies, found on the sea shore. I have found one specimen only near Caerlaverock.

Homalota clavipes is rare, and confined to Alpine districts. I found it on the top of Criffel on the occasion of our Field Meeting there on 4th August last.

Homalota incognita is found sometimes in the flood refuse at Kelton.

Gymnusa brevicollis is exceedingly rare. The only specimen I possess was found at the same place as the last mentioned.

Bledius spectabilis, *B. tricornis*, and *B. atracapillus* are not at all plentiful, and being marine species, are found on Kelton salt marsh.

Delister dichous is very rare, and also found at Kelton.

Pæderus fucipes is not only very local, but also very rare. When I turned it up first I was agreeably astonished to find that both genus and species were new to Scotland. It is found on the Caerlaverock shore near the Fishers' Thorn.

Anisotoma cinnamomea is also very rare. My specimen was found at Kelton in the flood refuse. This was also a new Scotch species, and is even rare in England.

Omosita depressa was a desideratum in almost every cabinet until I discovered a method of taking it by which I have been enabled to supply nearly all the Beetle hunters of the Kingdom with it. My method is to get a number of bones—those left from the dinner table are the best—put them into an open wire basket secured from prowling cats and dogs, and with a little hay in the bottom. Then on warm summer days when a gentle breeze blows towards the Solway I am certain to have, from four o'clock in the afternoon all through the night, a constant succession of *bona-fide* travellers all eager to partake of the savoury banquet spread for them. Next morning the revellers are "run in," and none return to carry the news of their untimely end. This is a remarkable instance of the power of smell, or whatever it is, possessed by insects, for this beetle, which is found only on the shore, arrives at the Crichton Institution grounds, a distance of six to eight miles, in a very short time after a westerly breeze begins to blow.

Heterocerus luevigatus and *H. fuscus* are both local species, and seldom found outside the wash of the salt water.

Aphodius Zenkeri is very rare; found in flood refuse at Kelton. I added this species to the Scotch lists.

Aphodius tristis is a local Beetle, and is found in the same place as the last.

Troscus dermestoides is another local species, found in the birch trees at Dalscairth and near Gasstown,

Trachys trogiodytes has an almost romantic history as a British species. Many years ago a member of this Society

—Dr Sharp of Eccles—when out beetle-hunting on the Cairn near Irongray Kirk, examined a mass of flood refuse and secured one specimen of this rarity—the first ever known in Britain or, in fact, Europe (for it has only recently been found on the Continent). Dr Sharp's joy at his good fortune I leave to your imagination. A few days after I happened to be in the same locality on the same errand and found another specimen, which considerably depreciated the value of Dr Sharp's prize, much to that gentleman's disgust.

These two specimens, however, are the only two yet found within the circuit of our coasts; not even the British Museum, with all its treasures, can boast of a single British specimen.

Elater elongatulus is another rarity which I captured amongst the birch trees in Dalscairth Park. It was not known as Scottish until I found it, and I had considerable difficulty in getting its name, as it was posted backwards and forwards from one Entomologist to another, until Dr Rye, one of the Editors of the E. M. M., told me what it was.

Cryptohypnus maritimus and *C. Sabulicola* are both of rare occurrence at Kelton in that prolific source of "good things"—flood refuse. They are, no doubt—like a good many other rare Beetles—brought down the Nith on the occurrence of sudden floods, clinging to straws, sticks, and leaves.

Telephorus abdominalis is a local insect, only found on the hills near the Routan Fridge.

Blaps mortisaga came into my hands in a curious and unexpected manner. When proceeding along Shakespeare Street early one Sabbath morning a few years ago, my attention was drawn to the strange attitude and gestures of a cock. With head to one side, and with as knowing a look as might become the countenance of an Entomologist, the cock was earnestly examining the under side of a large beetle, and calling to his paramour to partake of the choice morsel. I was just in time to preserve *Blaps mortisaga* from so ignoble a fate. This specimen is the only one that has yet been found in the district.

Polydrusus chrysomela is a local species, confined to Kelton, so far as I have ascertained.

Eriirhinus Æthiops is of excessive rarity, and an insect in which I take a lot of, I think, excusable pride. I have taken somewhere about fifty specimens altogether, and you will see the reason of my pride when I tell you that not in all Europe is there another beetle-hunter who has taken more than a dozen to his own hand. In London the dealers in insects sell this little beetle at 15s 6d each, so you will see it is of some value.

Apion Cerdo is a species which I discovered as British. I found it on the Purple Vetch on the railway bank below Collin. It is found there in small numbers. It belongs to the same genus as the Weevil, so destructive to clover seed.

Rhinomacer attelebioides is got by beating the Mountain Ash at Tinwald Downs, and is not found elsewhere.

Rhynchites auratus is found only at the Glen Mills on the common Blackthorn.

Donacia obscura is confined to a small swampy spot near Collin, or, at least, *was* found in that spot, for I fear it has been driven away, the cows having nibbled away the tall tussocks of grass in which it bred.

Phaeodon concinnum till a few years ago was scarcely known in Britain, and not much more so in Europe even. I found it (along with Dr Sharp) in great profusion on the salt marsh at Kelton. Whole pints of it might easily have been collected. The insect feeds on marine plants, and when the flood tide flows in amongst the grass this pretty little Beetle is seen borne on the advancing wave and sparkling like tiny emeralds. As the tide creeps over the large expanse of flat merse, either drowning or bearing on with it every living thing on its way, the Beetles are soon floating in handfuls, again to be dispersed with the receding tide. Although so common in this particular place, it seems strange that this species is not found at all on other parts of the Solway coast. It has been found on a part of the coast of the English Channel, but not in such numbers as with us.

Cassida Chloris has occurred in the flood refuse at Kelton; only one specimen, however, has been got.

Hippodamia 13 punctata, a member of the pretty and familiar family of Lady Birds, is another species of excessive rarity, found also in Kelton flood refuse.

Hyperaspis repensis, the last on my list of rarities, is procured by tearing up moss tufts and shaking them on a cloth. It is only found near Gasstown.

It only remains for me to explain why so many rare species are found at Kelton amongst the flood refuse. This flood refuse, or "wrack" as some people call it, is the sticks, branches, leaves, straws, and other material brought down the Nith and its tributary streams, in conjunction with similar material brought in from the Solway along with seaweeds, &c. When the weather has been dry for a month or so the beds of streams away up amongst the hills become filled up with rubbish of all sorts, and this is resorted to for food and shelter by numerous Beetles. Then the rains descend and the floods come, and all this rubbish, with its tenant beetles, is borne down to the sea, and the first tide throws it on the merse at Kelton in great heaps. Riddling this material into a sack, and afterwards examining it at home, it is found to be literally crawling with beetles gathered from the whole basin of the Nith and some of the streams which discharge themselves into the Solway. In this way you will see that an hour's collecting at Kelton is equal to a week spent in hunting for rare beetles in the hills and glens of Nithsdale.

I am afraid I have wearied you with my tedious narration, but, speaking for myself, I am sure I would be only too glad if I could compass a list of rare beetles which would occupy an hour or two more in reading.

I still hope for further extensions of the list, and may I also hope that I may be aided in extending it by some of our younger members, who, as yet, are only considering what branch of Natural History to study.

SPECIAL REPORT ON THE GEOLOGICAL FEATURES OF THE DISTRICTS VISITED BY THE MEMBERS OF THE DUMFRIES NATURAL HISTORY SOCIETY DURING THEIR SUMMER EXCURSIONS IN 1878. By Dr GILCHRIST.

Read Nov. 1st, 1878.

As considerable geological uniformity exists in the several districts visited, it will save much repetition to give a brief general description of them, leaving details to be noticed in the successive excursions.

1. The prominent rock forming the basis of the hill system of the South of Scotland is the so-called Silurian, constituting the various well-known groups of hills in the neighbourhood, as the Tinwald, Mouswald, Galloway groups, &c. It formed a noted feature in every one of the places visited.

2. A second variety of rock not unfrequently seen in the neighbourhood is the so-called Permian. It is characteristic as well of the subordinate as of the main valleys in the district, which forms the subject of consideration, in most of which at least fragments of it will be found where it has not been entirely swept away by denudation. It will be readily recognised in the sandstone quarries of Locharbriggs, Craigs, &c.

3. A third feature of the districts visited is the result of the so-called glacial action in the form of glaciated rock and glacial till. These are seen much less frequently, though not at all uncommon, the former especially in its ruder aspects, which are easily recognised in the so-called Roches Moutonnées, constituting a series of rounded smooth rocky knolls not unfrequently seen in certain districts. The till is, as a rule, only seen in natural or artificial sections of the surface. It consists of a matrix of clay with fragments of rock of all sorts and sizes irregularly interspersed through it, being smoothed, striated, and more or less rounded. In its typical form at least once seen it is easily afterwards recognised.

4. A fourth feature of the districts visited is the superficial accumulations of gravels and sands, the result of

aqueous action. These are found for the most part at the mouths or along the sides of the valleys. Viewed as to time they are posterior to those last mentioned, that is, they are the result of river, lake, or sea action, subsequent to the so-called glacial period, often consisting of the reassorted materials derived from the surface deposits of that period. They are well seen in almost every excavation in the immediate neighbourhood of the town, and are notably developed in the vicinity of Auldgirth Bridge, Cummertrees, &c.

5. Connected with these, but forming a distinctive feature, are the ancient raised beaches, which are very marked in several parts of the valley of the Nith.

The first excursion of the season was to Lincluden, Holywood, and neighbourhood. The district then visited presented us only with the features referred to in No. 4 of our general statement, namely, the superficial accumulations of gravels and sands. These are well seen on the road from town to Lincluden, and especially in the railway cutting of the Castle-Douglas line, where beautiful examples of bedding, frequently characteristic of these deposits, are visible. These gravel accumulations, as seen in their undisturbed condition, consisted of rounded, oval, or elliptic, or even linear mounds or elevations on the surface of these districts in which they occur, their longer axis, as a rule, lying parallel with the valley. When seen in section, as in the railroad cutting referred to, their true character and origin are at once made manifest. On passing along the side of the Nith interesting sections of these mounds were noticed, obviously indicating the existence of water action at a much higher level than that which now obtains. Near the farm of Jardinetown the members were conducted to the top of one of these mounds to examine a shallow depression in the surface not easily explained. In crossing the Cairn at the village of Newbridge, in the bed of the stream a sandstone rock was observed, which is a member of the Permian system of rocks already referred to. No example of the Silurian was seen in this excursion, unless it be certain fragments constituting

the Druidical Circle well known at Holywood. These fragments are not boulders and must have been brought to the spot from some distance, by what means we leave others to determine.

The second excursion was to Dalswinton and neighbourhood. At Friars' Carse and on to Auldgirith Bridge we have a magnificent development of the gravel mounds. In some parts of the river itself we have again examples of the Permian sandstone, lying nearly horizontally, as it generally does, and thus well contrasted with the Silurian, constituting the Dalswinton hills in the immediate neighbourhood, which lies at a very high angle, often-times nearly 90 degrees. At various points in crossing the hills the ordinary characters of this rock system were well seen, namely, its grits, shales, conglomerates. On leaving the hills towards Dalswinton village an interesting fragment of Permian sandstone was noticed. Its outlines at a distance were so soft and round that it was mistaken for an ordinary kames or collection of gravel. This character was obviously owing to the soft and easily abraided nature of the sandstone. At Dalswinton House we have an interesting example of river action; the cliff on which the mansion stands being an old river bank. On reaching the Holywood Station we had an opportunity of examining a most interesting section of ancient river action in a new cutting which was being proceeded with through ancient gravel sands, etc. There we found numerous beautiful specimens of the variegated sandstone, so often found in the bed of the Nith, the original site of which, so far as we know, has not yet been ascertained.

The third excursion was to the Bridge of Dee and neighbourhood. On this occasion we shall begin by taking a rapid glance of the geological features of the districts through which we are passing per rail. 1st. From the Station onwards for about a mile we pass through a series of the gravel mounds in the vicinity of Maxwelltown. We then come to a most interesting section of the Permian breccia commencing near the schoolhouse of Drumsleet. 3d. Im-

mediately we reach equally interesting sections of the Silurian, east and west of the Goldielea viaduct. Passing by many minor but not unimportant features we reach at the Dalbeattie cutting the Syenite, usually termed Granite. Immediately on crossing the River Urr we come again upon a succession of sections of the Silurian, which accompany us more or less to Castle-Douglas. Thence to Bridge of Dee Station, where we left the train, and the Bridge of Dee itself, were pointed out unmistakable indications of glacial action on the exposed rocky surface. The upturned edges of the Silurian strata were again well seen in the bed of the stream on crossing it to Threave Castle. After visiting Kelton Hill we proceeded along the Kirkcudbright road for a few miles to visit the site of a lead mine. This, so far as we could examine it, consisted of a horizontal shaft at the bottom of a cliff at the side of a burn. The traces of lead and zinc found were somewhat vague and uncertain, although the rock had the usual appearance of veinstone. The cliff consisted of our old friend the Silurian, and what was perhaps more interesting to us, it exhibited a fine though small example of contorted strata. In the immediate neighbourhood a large mass of Felstone Porphyry stood out prominently, a not unfrequent associate of the Silurian in the South of Scotland. The surface of the fields and grounds around is characterised by its broken irregular features. These are due to a succession of rounded, rocky knolls, the so-called Roches Moutonnées, and are as fine an example of this variety of glacial action as can be seen anywhere. Lower down in the glen we came upon a section produced by the burn which runs through it, which presented us with a fine specimen of glacial till. Thus we had, in this narrow spot, a very crowd of interesting objects for observation, thought, and study.

The fourth excursion was to Lochmaben, across the ridge of the Lochmaben and Mouswald hills, intervening between the valleys of the Nith and Annan. Starting by the Glasgow and South-Western Railway for the Racks Station, the members once more pass through a series of gravel mounds, as at Gasstown, Dargavel, Racks, &c. ; second, through a portion of the Solway moss, an ancient arm of the sea. Almost immediately after leaving the station they commence the ascent of the Lochmaben hills, which the members are now aware consist of the Silurian system, the strike running nearly east and west, and dipping to the north and east at a very high angle. The character of the rock is occasionally seen in quarries, cliffs, and exposed rock surfaces along the

ridge. A fine example of contorted strata in this system was recently detected in a broken cliff immediately west of the Beacon Hill. On reaching Lochmaben the members had an opportunity of seeing the extensive remains of glacial and post-glacial periods, covering the surface in its neighbourhood, and the numerous lochs surrounding it, most interesting from a geological point of view.

The last excursion included a visit to Hills Tower, Lochrutton, Lochaber, &c. The train was taken advantage of to Lochanhead Station, and gave the members another opportunity of seeing the gravel mounds at Maxwelltown, the deep cutting through the Permian breccia at schoolhouse, and the successive cuttings through the Silurian shale in the vicinity of the Goldielea Viaduct. The character of the rock, its dip and strike, were still better seen in two quarries near to the station; in the one nearest some specimens of detritic manganese were obtained. On leaving the Station the Silurian hills were crossed towards Hills Tower. In the lower ground before reaching the Tower, in an artificial cutting for drainage, were found glaciated till and glaciated boulders. After visiting the Tower the members proceeded to walk along the eastern side of Lochrutton Loch. The water was unusually low, and gave the members an opportunity of witnessing numerous indications of a belt of wood having grown along its margin, several of the trees being of considerable size, some prostrate, some broken off, but the roots apparently in their natural position of growth. As some doubts were expressed as to whether their position was a natural or artificial one, we would leave the question for further consideration. On nearing the south-east end of the Loch it was declared that its waters must at one time have covered a larger surface, if not occupied a higher level; this is indicated by the existence of a small morass now covering a number of acres, and standing at some height above the present surface of the water. Lochaber was next visited. Here again we had proofs of change of level, the existence of wood along the margin now covered by the water. On returning to the Station ridges of Porphyrites and Silurians were crossed, indicating, as they usually do in the positions they occupied relative to the surrounding hills, glacial action.

THE TRANSACTIONS
AND
JOURNAL OF PROCEEDINGS
OF THE
DUMFRIESSHIRE AND GALLOWAY

Natural History & Antiquarian Society.

Sessions 1878-79 and 1879-80.



[The Dumfriesshire and Galloway Natural History and Antiquarian Society was instituted on 20th November, 1862, and continued in a prosperous condition till May, 1875, when its meetings ceased. During this period *Transactions and Proceedings* were published on six occasions, the dates of publication being 1864, 1866, 1867, 1868, 1869, and 1871. The present Society was re-organised on 3d November, 1876, and the first portion of its *Transactions and Proceedings* was published in February, 1879.]

PRINTED AT THE DUMFRIES AND GALLOWAY COURIER OFFICE.



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PRINTED AT THE DUMFRIES AND GALLOWAY COURIER OFFICE.

1881.



OFFICE-BEARERS AND COMMITTEE.

SESSION 1880-81.

President.

J. GIBSON STARKE, Esq., F.S.A. Scot., F.R.C.I., of Troqueer Holm.

Vice-Presidents.

SHERIFF HOPE, Dumfries.

J. NEILSON, Esq., Dumfries Academy.

T. R. BRUCE, Esq. of Slogarie, New-Galloway.

Secretary.

ROBERT SERVICE, Maxwelltown.

Assistant Secretary.

JAMES LENNOX, Edenbank, Maxwelltown.

Treasurer.

WILLIAM ADAMSON, Broom's Road, Dumfries.

Members of Committee.

A. B. CROMBIE, Architect, Dumfries.

DR GRIERSON, Thornhill.

WILLIAM HALLIDAY, College Street, Maxwelltown.

J. W. KERR, the Academy, Dumfries.

WILLIAM LENNON, Brook Street, Dumfries

JOHN MAXWELL, King Street, Maxwelltown.

GEORGE ROBB, Rhynie House, Dumfries.

J. WATT, Rotchell, Maxwelltown.

MEMORANDUM FOR THE RECORD

DATE: _____

TO: _____

FROM: _____

SUBJECT: _____

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“THE various phases of character exhibited, the pleasing incidents that diversified the walks, the jokes that passed, and even the mishaps or annoyances that occurred—all become objects of interest, and unite the members of the party by ties of no ordinary kind. The feelings thus excited are by no means of an evanescent or fleeting nature : they last during life, and are always recalled by the sight of the specimens which were collected. It is not a matter of surprise that those who have been thus associated in a natural history ramble, who have met in sunshine and tempest, who have climbed together the mountain summits, or wandered through the shady glens, should have such scenes indelibly impressed on their memory.”—*Professor Balfour.*

JOURNAL OF THE PROCEEDINGS

OF THE

DUMFRIESSHIRE AND GALLOWAY

NATURAL HISTORY AND ANTIQUARIAN SOCIETY,

FOR SESSIONS 1878-79 AND 1879-80.



SESSION 1878-79.

October 4th, 1878.

The Annual Meeting beginning the Session of 1878-79 was held in the Mechanics' Institute—Mr Rutherford in the chair.

Rev. W. Lytteil, M.A., Kirkmahoe Manse, and Mr Murdoch, Rosemount Terrace, were elected Ordinary Members. Mr P. Cameron, junr., Glasgow, and Mr J. Thomson, Gatelawbridge, were elected Corresponding Members, the latter being transferred from the list of Ordinary Members until his return from Africa, whither he is about to proceed with an Exploring Expedition.

Mr F. W. Grierson exhibited a large Herbarium of Phanerogamic and Cryptogamic Plants collected during the past season, and also an instrument to explain the changes of the seasons, which he named the *Horaphraziter*.

The Secretary read his Annual Report, which showed that the Society had had a very successful session. The membership was now 100, and the average attendance at the Ordinary Meetings had been 27, and at the Field Meetings 16.

The Treasurer read his annual statement, showing a balance of £3 17s 5½d in favour of the Society.

Mr Grierson read the report from the Botanical Section, enumerating the plants and their habitats, which had been met with when at the Field Meetings and elsewhere.

Mr Glover-Anderson read the report of the Archæological Section, briefly going over the objects of antiquarian interest that had been visited by the Society.

The Chairman made some remarks explanatory of two beautiful micro-photographs executed by himself of a fly's tongue, and a specimen of *Pediculus vestimenti*.

Mr Hastings read some "Ornithological Notes," in which, after stating that although he had few opportunities of seeing for himself what is to be seen in wild nature, still many interesting birds that had been collected in the district were sent to him for preservation. He said that last August a young Crossbill had been sent to him from Palgowan, a sheep farm in Penpont, and which no doubt had been bred in that part of the country. They had now entirely disappeared from the Dalswinton woods, where their nests were at one time frequently met with. In the neighbourhood of Palgowan there is a shepherd's house known as the Lorg, situated at the head of the Water of Ken, and here there is a famous breeding-place of the Raven, Buzzard, and Mountain Ouzel. A little further down the Glen, on the hillside, there is a larch plantation, the trees in which are of no great height, but are thickly studded with Herons' nests. Mr Hastings said that during the past year he had received more of the Terns or Sea Swallows than ever before. He had received the Lesser Tern, the smallest species of the genus, from Carsethorn; the Common Tern, which, although common on some parts of the coast, was not so with us; from the Solway Firth, very many of the Arctic Tern; and three specimens of the Caspian Tern from the Scaur, near Dalbeattie, where they had been shot last October.

On the recommendation of the Committee, the following new rule was agreed to:—"That all Members whose subscriptions have been unpaid for fifteen months shall have their names deleted from the roll of membership if, after receiving notice from the Treasurer, they still neglect to pay."

It was also agreed, on the recommendation of the Committee, that a selection of the Society's Proceedings and Transactions be printed for the use of the Members. Messrs Robb, Glover-Anderson, and Service were appointed a committee to make the necessary arrangements for publication.

The election of Office-bearers and Committee was then proceeded with. It was intimated that Dr Gilchrist did not wish to be

re-elected to the office of President ; and, on the motion of Mr James Thomson, it was unanimously agreed to record a special vote of thanks to Dr Gilchrist for his untiring endeavours to promote the interests of the Society during the last two sessions.

Mr J. Gibson Starke, yr. of Troqueer Holm, was unanimously elected President ; Mr M'Ilwraith, Vice-President ; Mr Robt. Service, Secretary ; Mr James Lennox, Assistant Secretary ; Mr D. B. Hart, Treasurer.

The following gentlemen were appointed members of Committee :—Dr Gilchrist, Messrs Robb, Lennon, Thomson, Hutton, Maxwell, Glover-Anderson, and Stobie.

November 1st, 1878.

The Second Meeting of the Session was held in the Mechanics' Institute—Mr M'Ilwraith in the chair.

Messrs Jas. W. Kerr, High Street, Dumfries, and Thos. Gracie, Kirkmichael House, were elected Ordinary Members. Mr J. J. King, 207 Sauchiehall Street, Glasgow, was elected a Corresponding Member.

Dr Gilchrist read a "Report on the Geological Features of the Districts visited during the Field Meetings of 1878." (*See Transactions, 1879.*)

Mr Service exhibited a Bread Roller which had belonged to Robert Burns.

Mr Stobbie exhibited a very beautiful Elm Wardrobe Panel, remarkable for great variety of colour and figure.

December 6th, 1878.

The Third Meeting of the Session was held in the Mechanics' Institute—Mr M'Ilwraith in the chair.

Messrs James Williamson, Geddes Place, Maxwelltown, and James Anderson, Glasgow Street, Maxwelltown, were elected Ordinary Members. Mr John A. Harvie-Brown, Dunipace, Larbert, was elected a Corresponding Member.

Mr John Maxwell sent for examination a number of old implements or tools found in a cairn on Walton Park Hill by the tenant. They were pronounced by the antiquaries present to be quite modern. Dr Gilchrist exhibited some fine specimens of Fossil Plants from the Carboniferous Rocks.

The Chairman drew attention to the duplicate copies of the former Society's Transactions now in possession of this Society, and moved—"That complete sets (of six parts) be presented to the Dumfries and Maxwelltown Mechanics' Institute, Kirkcudbright Public Library, Inverness Natural History Society, and the Ayrshire and Wigtonshire Archæological Society; that the two remaining sets be bound for the use of the Members; and that all the other duplicate copies be distributed to the Members present at next meeting, and to any other Members who may apply for them."—The motion was seconded by the Rev. W. N. Dodds, and agreed to.

The Rev. W. Lytteil, M.A., Kirkmahoe, gave a long address on "Standing Stones," in the course of which he referred to the local names in Scotch and Gaelic by which many of these rude, upright pillars are designated. With regard to the testimony of our forefathers, he alleged that they spoke of the ancient standing stones as the work of the Peaghts or Picts, and as indicating the graves of heroes and distinguished persons. Many of the names of standing stones were in old Scotch, and the signification of such names was generally intelligible. Other names were in the Gaelic tongue, and by his study of that language he found that these names usually spoke of the standing stones and circles of rude pillar-stones as the burial places of heroes, warriors, and distinguished persons.

Mr J. Glover-Anderson read a paper on the "Provosts of Lincluden," with special reference to the Provost whose coat-of-arms was sculptured on the stone recently unearthed at Nithside.

On the conclusion of Mr Glover-Anderson's paper, Mr Thomson reminded the meeting that the gate and other protection at Lincluden Abbey had been erected by Capt. Maxwell, as suggested by the Society, and moved that the President be requested to convey to Capt. Maxwell the thanks of the Society for so kindly meeting its wishes.—The motion was seconded by Dr Gilchrist, and unanimously agreed to.

January 3rd, 1879.

The Fourth Meeting of the Session was held in the Mechanics' Institute—Mr J. Gibson Starke in the chair.

Mr Henry Hutchison Lennox was elected an Ordinary Member.

The Chairman then delivered his Presidential Address on the subject of "The Scope and Spirit of Scientific and Antiquarian Inquiries." The address was listened to with much interest by the very full meeting, and at the close Dr Gilchrist proposed a special vote of thanks to Mr Starke, which was heartily accorded.

Dr Gilchrist read "Notes on the [so-called] Druids' Circle at Holywood," in which he gave an account, with the aid of a diagram, of its measurements, the positions of the stones, and of the geological formation to which each of them belongs. A short discussion followed, and Dr Gilchrist promised to refer more fully to the subject on an early date.

Mr F. W. Grierson exhibited some very neat preparations of the Dentition of the Echinodermata. The Secretary exhibited a Falcon's Hood, belonging to Dr Grierson, Thornhill; a Female Goosander, recently captured at Arbigland; a pair of the Little Grebe; and a Kingfisher. The last two species, he explained, had within the past two months become numerous in the locality. The Secretary also exhibited specimens of a number of birds he had picked up dead during last month, and which had doubtless been killed by privation in the severe frost. These consisted of the Wren, Longtailed Tit, Water Hen, Fieldfare, and Redwing.

A number of duplicate copies of the former Society's Transactions were then distributed to the Members present.

By the kindness of the President, coffee and cakes were then served, after which the Rev. Mr Dodds expressed the great satisfaction with which the Members had partaken of the good things provided for them by Mr Starke.

February 7th, 1879.

The Fifth Meeting of the Session was held in the Mechanics' Institute—Mr J. Gibson Starke in the chair.

Messrs John Rutherford, Pleasance, Kirkmichael, and T. R. Bruce of Slogarie were elected Ordinary Members.

Mr Houston exhibited a curious old document, being "a Report presented to His Most Excellent Majesty King James I. of all the Christenings and Burials within the City of London, and the liberties thereof." Mr Lennon exhibited a specimen of *Sphodrus leucophthalmus*, which is a rather scarce beetle in this district.

Dr Gilchrist exhibited a Prescription Book of 1731, and pointed out that the medicines of those days were generally made up of from ten to twelve different articles. Mr James Gibson exhibited a specimen of the fossil *Productus giganteus*. Mr M'Veigh, Castlebrae, sent an interesting collection of old books, coins, &c., amongst which may be mentioned "The Lives of the Popes," 1588; St. Jerome's Version of the Bible, 1498; an edition of the Bible in six little volumes, 1671; and Hamilton of Gilbertsfield's "Wallace," in old Scottish verse, 1721. Specially noticeable amongst the coins and seals were the Great and Small Seals of James VI.; two Seals of William, Duke of Douglas and Turenne; the Seal of the Duke of Albany, Fife, and Monteith, 1396; some silver pieces of Isabella the Catholic, of Spain; a coin of Pope Pius V.; and a beautiful coin, of which six only were struck, to commemorate the acquisition by George III. of the title of King of Man. The remaining five are known to be—one in the Mint, another in Windsor Castle, the third in the British Museum, the fourth belongs to the Earl of Derby, and the fifth to the Duke of Athole. The one in Mr M'Veigh's possession was presented to him by Lady Margaret Murray, daughter of the last King of Man.

Dr Gilchrist read an account of "Our Bird-feeding Experiences," consisting of some interesting notes on the habits of the birds which had resorted to the Crichton Royal Institution to be fed during the recent severe weather.

Mr Davidson read a paper on "Alchemy and the Alchemists," in which he gave an account of the numerous discoveries that had been made by the alchemists whilst engaged in their investigations.

March 3rd, 1879.

The Sixth Meeting of the Session was held in the Mechanics' Institute—Mr J. Gibson Starke in the chair.

Mr Watt, Victoria Terrace, was elected an Ordinary Member.

The Secretary read a report from the Committee regarding the distribution of the *Proceedings and Transactions, 1877-78* (printed copies of which were laid on the table), recommending that one copy should be presented to each Ordinary and Honorary Member of the Society, and that extra copies be supplied at 6d each to

any Member who might wish to have them.—On the motion of Mr M'Ilwraith, the report was unanimously adopted.

Mr Rutherford read a paper, entitled "Ingenuity of a Spider," in which an account was given of the habits of *Theridion lineatum* (Walck.) when providing for the safety of its egg cocoon.

Mr Rutherford also read a paper on "Instinct of the Wasp," detailing the behaviour of the inmates of a nest of one of the social wasps when their nest-hole was obstructed with a wisp of hay or dock leaves.

Mr Rutherford next read "Microscopic Notes," consisting of observations on the habits and anatomy of various microscopic subjects living in muddy ditches at Jardineton. The paper concluded with an account of experiments with frosted potatoes, in which the various changes that take place in a potato when exposed to frost were clearly described. A long conversation followed upon the reading of the several papers, and some interesting information was elicited.

The Chairman exhibited a fine specimen of *Mygale fasciatus* (Koch) from Ceylon. Mr Rutherford showed in his microscope an interesting series of objects, including crystals from a frosted potato. Mr James Lennox exhibited a copy of Allan Ramsay's Works (original edition), which had belonged to Robert Burns for eight years prior to his death.

April 5th, 1879.

The Seventh Meeting of the Session was held in the Mechanics' Institute—Mr M'Ilwraith in the chair.

Messrs R. Chrystie, Samuel Chrystie, John Neilson, J. Arnott, and Provost Shortridge were elected Ordinary Members.

The Secretary then submitted the following list of Field Meetings, to be held on the first Saturday of each month as formerly, as proposed by the Committee:—May, Kirkmichael; June, Corsock; July, Slogarie; August, Annan Waterfoot to Brow Well; September, Arbigland.—On the motion of Mr Thomson, the list was approved of.

A review of the lately issued *Transactions*, as contained in the *Scottish Naturalist*, was read by Mr Moodie. An animated conversation ensued as to the best mode of extending the operations of the Society, and it was agreed that preparations should be

commenced with a view to compiling a *Flora and Fauna* of the district. The Secretary was instructed to make such arrangements with members from time to time as would further this desirable aim.

The Secretary read a paper, communicated by Mr Charles Black, on the "Introduction of Badgers at Arbigland," giving an interesting account of their mode of life as observed by him there. In 1876 Col. Blackett, the proprietor of Arbigland, desirous of keeping down the rabbits on his estate, had procured three badgers—one male and two females—and turned them out. They had since bred upon the estate, and had been found to be very useful in destroying the young rabbits. When they came upon a hole containing a brood of young rabbits, they did not go in at the entrance, but dug right down on the top of the nest, and never failed to hit the exact spot, no matter how far it was from the mouth of the burrow. They were not observed to harm any rabbits, except those in the youngest stage.

This concluded the business of the evening and of the Winter Session.

SESSION 1879-80.

October 2nd, 1879.

The Annual Meeting commencing a new Session was held in the Mechanics' Institute—Mr J. Gibson Starke in the chair.

The Rev. R. W. Weir, minister of Greyfriars'; Messrs W. J. Maxwell, Terregles Banks; Murdoch, Netherlea; Gillespie, Queen's Place; J. Fergusson, Queen Street; Smith, Commercial Bank; Tennant, the Academy; L. M. Dinwiddie, Greenbrae; Allan, Albany Place; M'Andrew, New-Galloway; and M'Veigh, Kim-meter Cottage, Annan, were elected Ordinary Members.

The Chairman presented to the Society, on behalf of Mr John Allan Broun, F.R.S., five volumes and paper-covered supplement of the *Makerstoun Observations*, another volume entitled *Trevandrum Observations*, and six small separate papers on astronomical subjects, all edited by Mr Broun. It was moved and agreed that the special thanks of the Society be transmitted by the Chairman to Mr Broun for his valuable donations.

The Chairman presented to the Society a copy of his *History of the Parish of Troqueer*.

The Secretary laid on the table twelve Norwegian publications, presented by Charles Holst, Court Paymaster, Christiana, on behalf of the Royal Literary Exchange of Norway.

The following Office-bearers and Committee of Management were then elected for the ensuing session:—President, Mr J. Gibson Starke; Vice-President, Mr Thomas Jackson; Secretary, Mr R. Service; Assistant Secretary, Mr James Lennox; Treasurer, Mr William Adamson. Members of Committee—Dr Gilchrist, Messrs Robb, Lennon, James Thomson, Hutton, John Maxwell, J. W. Kerr, and P. Stobie.

Mr D. B. Hart submitted a statement of his accounts for the past session, and Messrs Kerr and Moodie were requested to audit the statement. Mr Hart stated that a large number of Members were in arrears with their subscriptions, and he could not at present find time to collect them. At the request of the meeting, Mr Moodie kindly undertook to collect as many of these subscriptions as possible.

The Secretary read his Annual Report, which showed that in every respect the progress of the Society had been satisfactory during the past session.

On the recommendation of the Committee, it was agreed that the Annual Subscription be raised to 2s 6d, and that in future new Members be charged an entrance fee of 2s 6d.

November 7th, 1879.

The Second Meeting of the Session was held in the Mechanics' Institute—Mr J. H. Maxwell in the chair.

Mr John Newbigging, Kirkbank, and Mr M'Kill, Coal Agent, were elected Ordinary Members. Mr J. Allan Broun, F.R.S., was elected an Honorary Member. Mr William M'Ilwraith, being about to proceed to Queensland, was transferred to the list of Corresponding Members.

The Secretary announced that the valuable collection of nearly 200 species of Zoophytes, Crustacea, Echinodermata, Spongia, Marine and Fresh Water Shells, which were arranged on the table, had been presented to the Society by Dr Gilchrist. A special vote of thanks was passed to Dr Gilchrist for his valuable

donation, and the Secretary was requested to take charge of them in the meantime.

The Secretary intimated that he had received another portion of the *Trevandrum Observations* from Mr J. Allan Broun; and from the Rev. D. Honeyman, Halifax, N.S., copies of *Notes on Nova Scotian Geology* and *Transactions of the N.S. Institute of Natural Science*.

Mr M'Ilwraith read a paper on "Local Anthropology." (*See Transactions.*)

The Secretary read a paper entitled "Effects of the Weather of the Past Twelve Months upon Animal Life." (*See Transactions.*)

After the papers had been read and discussed,

Mr Moodie submitted the following resolution:—"That in view of the departure of Mr William M'Ilwraith, late editor of the *Dumfries Courier*, for Australia, this Society expresses its best thanks for the unwearied interest he has taken in its behalf. Having been a member of Committee since its commencement, and having acted as Vice-President during that time, the Members would express their sense of the great benefits he has bestowed on the Society by his constant endeavours to maintain and extend its usefulness. In expressing their great regret at the loss of his valuable assistance, the Members assure him that he has their best wishes for his future welfare in his new sphere of labour." He thought he need add nothing to the resolution. He had been told that Mr M'Ilwraith since he was a child had taken an interest in scientific research. He knew that he had at least taken an active interest in it since he came to manhood, in Ayrshire, in Wigtownshire, and in Dumfriesshire. Assisting to promote many scientific associations, he was, he believed, largely instrumental in forming the Ayrshire and Wigtownshire Archæological Association.

Mr J. Maxwell had much pleasure in seconding the resolution. Mr M'Ilwraith had read a paper to-night which would be a credit to any society in Scotland; and he thought it ought to be engrossed in their *Transactions*.

The Chairman was sure they all felt exactly what had been stated in the resolution. The interest which Mr M'Ilwraith had taken in this and similar societies had been gratifying to the Members; and in the land to which he was about to proceed he trusted the same feeling he had evinced here might animate him

there, and that they would hear in future years that he was still taking an active interest in antiquarian and other researches. He had known Mr M'Ilwraith professionally for a number of years, and he was sorry he was leaving this district, but he trusted that it was for his own benefit, and that of his family. They would all be glad to hear of his success.

Mr M'Ilwraith begged to thank them for this expression of their kind feelings. The pursuit of natural history and antiquarian subjects had engaged a considerable portion of his leisure. It had not been his fortune to command a great deal of time to devote to those pursuits to which he felt a natural inclination, but it had seemed to him that in devoting what leisure he had to the study of the works of Nature and kindred subjects he was in the first place cultivating his own faculties and furnishing his own tastes with pleasure, and, in the next place, assisting somewhat in promoting the welfare of our race. For if men would turn their attention more to the things that lay around them, and study them systematically and carefully, they would find therein a source of joy—not mere pleasure, but something higher, purer, holier—which those who followed lower pleasures had no conception of. One of the concerns he had in leaving this country was that in a new land he might not be able to meet with so many people of kindred tastes in these respects. It was an opinion pretty prevalent here that in the Australian colonies there was a pretty strong thirst for gold; that people were entirely abandoned to making money, and had little regard to the finer enjoyments and amenities of life. He had, however, been somewhat disabused of that idea by reading in the *Queenslander* an account of a meeting of an Acclimatisation Society. The subject of discussion was the introduction of a number of our home birds there, and it was resolved that some efforts should be made to introduce such birds as the Goldfinch, Bullfinch, and Chaffinch, but not the Sparrow. The Sparrow was introduced at Melbourne, and his presence there had not been so agreeable as to induce them to wish for him in Queensland. In the report of the proceedings he found a long, intelligent, and interesting speech on the subject made by a pressman; and when he read it and the remarks of the other members he thought to himself—Well, this could not be quite so outlandish a place as he had anticipated after all. He hoped he might be the means of assisting to keep up the

interest of the people of this district in Queensland by sending home a few notes occasionally.

December 5th, 1879.

The Third Meeting of the Session was held in the Mechanics' Institute—Mr Watt in the chair.

Mr Moodie read a paper on "Vegetation in 1879," communicated by Dr Gilchrist.

Mr Hastings read a paper on "The Rarer Birds that had lately occurred in the District." (*See Transactions.*)

Short discussions followed the reading of the papers; and, on the motion of the Chairman, votes of thanks were awarded to the authors.

January 9th, 1880.

The Fourth Meeting of the Session was held in the Mechanics' Institute—Mr J. G. Starke in the chair.

The Rev. J. B. Johnstone, Rev. T. Underwood, Messrs Watson and Gray were elected Ordinary Members.

The Secretary reported that a number of books had been received from Dr Gilchrist in gift to the Society, including a complete set of the *Transactions of the Montrose Natural History Society* and a copy of the *Transactions of the Royal Irish Academy* (Vol. XIV.), bearing an inscription which shews it to have once belonged to Sir Walter Scott, who was one of the Honorary Members of that Society.

Dr Grierson exhibited a very fine specimen of Asbestos, brought from Canada by Mr R. Wallace, Auchenbrack, who recently visited the Dominion on an agricultural survey, as the delegate of the Upper Nithsdale farmers. Asbestos, Dr Grierson said, was known to the Romans and used to form a cloth to envelop the bodies of the dead. Thus enveloped, they were placed in the funeral pile; and the cloth being indestructible by fire, the ashes were retained in it. For a long time it seemed to have been put to no other special purpose. In Italy the source of it was Piedmont. Recently it was applied for the first time, and successfully, to a purpose that of course was not thought of in former days. A difficulty had always been experienced in getting a suitable packing for the pistons of steam-engines, until Asbestos was used,

and found to answer the purpose admirably. Steamers crossing the ocean used to shew a failure in speed towards the end of the voyage, caused by the wasting of the packing and the consequent escape of steam at the pistons; but this had been perfectly cured by the employment of Asbestos. The Asbestos bed in Piedmont, it so happened, belonged to monks, and when the demand increased for it the price greatly increased; but about the same time it was discovered to exist in Canada, and much more extensively. He possessed about twenty specimens of Asbestos from different parts of the world, including Piedmont, Russia, and Aberdeenshire; but this was the first specimen of the Canadian that he had seen, and it was of a much finer quality than any of the others. Its fibres were as delicate and flaccid as the finest silk. If it existed in sufficient quantity in Canada—and there were said to be some miles of it in the Primary Rock—it must ultimately prove to be a mine of incalculable wealth.

The specimen was greatly admired for the fineness of its texture. The Chairman produced a ring from his finger which contained a very pretty Catseye stone—that, as he explained, being simply Asbestos in its most beautiful and rarest form; the Catseye, which was found in British India and Ceylon, being indeed much rarer than the diamond.

Dr Grierson also exhibited a specimen of a rabbit's head, of which he had several, but this was the last received, shewing a most abnormal length of teeth. He observed that one side of the jaw had been fractured, probably by a shot, and kindly healed by nature; but the lower jaw having been slightly displaced, the teeth no longer came together, but passed each other without contact. The consequence was that the teeth grew to a great length. Though surrounded with food, the poor creature must have latterly been unable to eat; and in fact he never saw a more starved animal than this was.

The Chairman read a long, interesting, and instructive paper, entitled "Notes on the Stone Age;" and at the close Dr Grierson exhibited, by way of illustration, specimens of celts, axes, arrow-heads, flint flakes or knives, &c. The celts were collected from various quarters, and were in the rough and polished, the latter indicating an advance in civilisation. One of the finest was also one of the smallest, and, alike in its shape and the stone of which it was made, was quite new to Dr Grierson. It was turned up

recently with the plough in the parish of Tinwald ; and he could find no drawing resembling it exactly in any of the authorities. Another, which was also one of the coarsest, was from the Island of Aneityum. It was brought here by the Rev. John Inglis, who went out there as a missionary thirty years ago. The natives were then in a state of complete savageness, and were using stone implements. Now they were civilised, and conducting a good trade in various products with New Zealand. It was curious to reflect that the man who made that rude instrument as a savage might still be alive, civilised and a Christian. As Mr Starke had said, celts were discovered in all parts of the world, and were very similar in form ; but some of them were made of stone that was not known anywhere to exist, and the discovery of this formation might lead to the discovery of the cradle of the race.

Two celts were exhibited by the Chairman, sent from India by Mr Hope, brother to Sheriff Hope ; and two by the Rev. Mr Johnstone, obtained in the Jed district.

Mr Lennon read a paper on "Local Museums," which was much appreciated.

February 6th, 1880.

The Fifth Meeting of the Session was held in the Mechanics' Institute—Mr J. G. Starke in the chair.

Sheriff Hope ; Capt. Maxwell of Terregles ; Mr Edward Maxwell, Terregles ; and Dr Symons were elected Ordinary Members.

The skin of a Canadian wolf (*Canis latrans*), brought by Mr R. Wallace from the Dominion, and presented by him to Dr Grierson for the Thornhill Museum, was forwarded by that gentleman for exhibition. In a letter the Doctor explained that the animal, which is thicker and shorter than the common wolf, is described by Sir John Richardson, and inhabits a northern range to the 55th degree of latitude.

The Chairman read a second and concluding paper on "The Stone Age," speaking of the mineral Jade, the material from which the rarest, most beautiful, and most valuable celts were made, and of the Fauna of the stone period. Jade, he explained, was nowhere found in Europe in the native state, and only, as far as known, in Asia ; the principal mines being in the north of Cashmere, and in Turkestan, whence it was obtained by the

Chinese. It also occurred in New Zealand. In China Jade was greatly prized: it was known as "the gem;" and the Oriental imagination had discovered in its properties symbols of all the human virtues. It was sculptured into vases and other ornaments of the most artistic design and exquisite workmanship by Chinese artificers; in India the objects made of it were, after the manner of the Hindoos, set with brilliants. Specimens of Chinese workmanship in Jade were exhibited, kindly lent to Mr Starke by Mr Dudgeon of Cargen. These included a vase of green Jade, with ring ears, the whole sculptured from a solid block, and inscribed with Chinese characters; a mass of white Jade exquisitely carved, and representing in relief pilgrims ascending from the foot of a hill to a pagoda at its summit, and on the other side a forest scene; a piece of brown or tortoise-shell Jade, cut by a Chinese artist into the form of a lotus leaf, with handles fashioned to the shape of lizards; and a seal of white Jade, richly studded with rubies and emeralds set in gold, and having a blood-stone stamp. The vase was a part of the loot of the French soldiery when the summer palace of the Emperor of China was sacked in the war of 1860. Mr Starke also exhibited a New Zealand celt made of native green Jade, lent by Mr E. C. Maxwell, Terregles, who himself brought it from that country. It formerly belonged to a famous chief, who in the Maori War thrice cut down the British standard with his own hand and defeated our troops. Mr Maxwell, in a note, explained that Jade was found in only one portion of New Zealand, that the natives travelled long distances to obtain it, that the clubs or celts were formed from it by being rubbed with sand; and Mr Starke added that this one, which was large, flake-shaped, and beautifully translucent, would probably have engaged a man's whole life-time in the polishing of it, and might have been handed down from generation to generation as a priceless possession in the family of the chief. In Scotland there was a mineral to be found which had many of the properties of Jade, and could not be distinguished from it even by expert mineralogists without the aid of the microscope. This was Prehnite. Referring to some letters in the *Times* regarding Jade celts recently found among the lake-dwellings in Switzerland, Mr Starke remarked that these must have been brought from Asia in far-off times. The paper concluded with an interesting description of the Fauna of that remote period.

The Secretary read a paper, communicated by Mr M'Andrew, New-Galloway, on "The Carices of the Stewartry." (*See Transactions.*) Mr M'Andrew forwarded specimens of all the species mentioned in the paper for presentation to the Society.

March 6th, 1880.

The Sixth Meeting of the Session was held in the Mechanics' Institute—Mr Gibson Starke in the chair.

Messrs Byth, the Academy; J. Broun, Solicitor; J. M'Meekan, Linden Grove; and J. J. Clark, Cintra Villa, were elected Ordinary Members.

The Secretary announced that he had received from Mr Shaw, Tynron, as a donation to the Society's Library, a copy of the *Graphic* of 31st January last, containing an article written by him on "The Appreciation of Beauty by Animals."

The Secretary exhibited a pair of Scaup Ducks (*Fuligula marila*), male and female, and remarked that the species had occurred in this district during the past winter in unusually large numbers.

Mr Moodie read a paper, communicated by Dr Gilchrist, on "The Effects of a Prevailing Wind on Trees."

Mr Rutherford gave an address detailing his observations on the Salmon Disease (*Saprolegnia ferax*), the life history of which he fully explained by the aid of several diagrams. A short discussion followed; and Mr Rutherford, in acknowledging the vote of thanks passed to him for his valuable communication, promised to take up the subject more fully at next meeting.

The following communications from Corresponding Members were then read by the Secretary:—

- "Notes on a Collection of Trichoptera from the Stewartry," by Mr F. G. Binnie. (*See Transactions.*)
- "Notes on a Collection of Neuroptera-planipennia from the Stewartry," by Mr J. J. King.

Small collections of Neuropterous Insects, made by Mr R. Service, formed the subjects of these two communications. Annexed is the list of species named in Mr King's paper: all

were collected in localities in the east of the Stewartry of Kirkcudbright:—

Sialis lutaria, <i>Linn.</i>	Hemorobius limbatus, <i>Wesm.</i>
„ fuliginosa, <i>Pict.</i>	Chrysopa flava, <i>Scop.</i>
Micromus paganus, <i>Linn.</i>	„ vittata, <i>Wesm.</i>
Hemorobius micans, <i>Oliv.</i>	„ alba, <i>Linn.</i>
„ humuli, <i>Linn.</i>	Panorpa germanica, <i>Linn.</i>
„ nervosus, <i>Fab.</i>	

April 23rd, 1880.

The Seventh and last Meeting of the Winter Session was held in the Mechanics' Institute—Mr Neilson in the chair.

The Secretary explained that in the ordinary course this meeting should have been held on the 2nd inst., but owing to the General Election he had taken the responsibility of postponing it till this date.

Messrs R. W. Miller, Queen Street; J. Wilson, Inland Revenue; Alan B. Crombie and James Crombie, architects, were duly elected Ordinary Members.

The Secretary announced that he had received four parts of the *Transactions of the New York Academy of Sciences*; three Annual Reports by the Comptroller of the Currency of the United States; two pamphlets from Mr E. S. Morse, Salem, Mass.—one on *Traces of an Early Race in Japan*; the other on *Dolmens in Japan*—and two papers on “The Salmon Disease,” read before the Royal Society of Edinburgh, by Mr A. B. Stirling, curator of the Anatomical Museum—all of which donations were laid on the table. Mr W. G. Gibson sent a Radiometer for exhibition, and the Chairman explained its construction and its scientific value.

The following list of Field Meetings was then agreed to:—First Saturday of May, Thornhill Museum; First Saturday of June, Colvend; Second Thursday of July, Enterkin Pass; Second Thursday of August, Annan District; First Saturday of September, Criffel.

A proposal by Dr Gilchrist, of which consideration had been delayed from the February meeting, to have a Map of the Society's District printed, was taken up; but, after some discussion, it was agreed that owing to the state of the Society's funds the matter should be adjourned *sine die*.

In the absence of Mr Rutherford, through serious illness, the Secretary read a communication from that gentleman, entitled

“Observations on the Salmon Disease.” (*See Transactions.*) The paper in part recapitulated in substance some remarks on the same subject made by Mr Rutherford at last meeting, and also stated the result of subsequent observations. Considerable discussion followed, most of the speakers agreeing with Mr Rutherford’s conclusions.

Mr J. W. Kerr read a paper, communicated by Dr Gilchrist, on “The Application of the Observant Powers.” The subject was treated in a very interesting manner.

Mr Lennon sent a paper, entitled “Notes on Rare Beetles”—second notice (*see Transactions*)—which was read by the Secretary.

Votes of thanks were passed to the authors of the papers, and thereafter the meeting separated, thus concluding the business of the Winter Session.

FIELD MEETINGS OF 1879.

The First Field Meeting was held at Kirkmichael on May 4th, and there was a large attendance of Members. Various antiquarian remains were visited, and Capt. Lyon kindly entertained the party in the mansion house at the close of the meeting. No detailed report of the meeting was handed in.

The Second Meeting was held on June 6th, when, on the kind invitation of Mrs Murray Dunlop, the Society visited the estate of Corsock. There was a large muster of Members, and the weather in the morning was favourable, but at intervals during the day it was very wet and stormy, so that all were more or less drenched before reaching their homes in the evening. Field naturalists as a rule are indifferent to weather, and generally believe the saying that “Nature’s frowns are beautiful,” faith in which kept them happy under the depressing influence of the cold and rain of Saturday. The party met at Dumfries Station, and proceeded by the 8:32 A.M. train to Parton Station, being joined at Castle-Douglas by some of the Members from that district. Arrived at Parton Station, a small section of the party, against the advice of their more experienced brethren and the plain teaching of the Ordnance Map, determined on going by the road

to the left—a longer and more circuitous route, and, moreover, uncompensated for by flowering hedgerows and overhanging herbage such as botanists and entomologists love to revel in. The larger body, however, walked over the hills by Falbae Moor, past some excellent collecting ground. The first halt was made to admire the beautiful floral display in front of the gamekeeper's cottage at Parton—an effect produced not by expensive plants purchased from a nurseryman, but by the common native denizens of the surrounding woods and meadows. Certainly no finer floral spectacle could have been produced by the costly occupants of the modern flower garden. A little further on was secured from off a hazel bush a fine specimen of *Nemophora pilella*, a member of a genus of moths with long, glistening, thread-like antennæ, popularly known as "Long Horns." The species had not previously been met with in the district. A small bog covered with innumerable spikes of the pretty flowers of the bogbean was next examined, and some nice bunches of the fragrant flowers were gathered for further examination at home. The insectivorous character of the plant was shown in the fact of many small beetles being found adhering to the anthers by the viscid substance exuded from the flowers. On the little knoll the scanty grass was studded with the white flowers of an everlasting (*Gnaphalium dioicum*), and an abundant supply of specimens was collected, the plants being in fine bloom. Near this place some of the party came upon some patches of a pure white form of the common blue violet, and carefully transferred the plants to their vasculums. A bare and bleak moorland was now entered upon, where flowering plants were as yet scarcely above the ground. Very interesting, however, to those of ornithological tastes were the various birds breeding in this solitude—the Lapwings as they, alarmed for the safety of their young, wheeled about in circles, uttering their melancholy cries; the hoarse calls of the Grouse; the bleating of Snipe; and from every knowe as the party passed arose "the wild scream of the Curlew." A poor little duckling, still retaining some warmth, and which had apparently died from exposure, was picked up and pocketed with the remark that it would make "a specimen." A little farther on and Corsock Moor was reached, crossing which the party entered the grounds of Corsock House, and were met at the garden by those who had gone by the other road with a cheer of triumph on having gained the march—a result which was not

grudged them, as vasculums and other receptacles for specimens were as empty as when they had set out. Under the conduct of the gardener and the forester the party went round the beautiful and well-kept gardens and policies, various fine trees and shrubs being pointed out. Prominent in interest was a fine Silver Fir, which about twenty years ago was broken over about eight feet from the ground. The late Mr Murray Dunlop had lead run into the stem to preserve it, and soon after seven or eight horizontal branches grew out. From these again thirty-five upright, tree-like stems have sprung to a height of about forty feet, forming a very curious and interesting sight. There are several other fine trees, amongst them being a beautiful *Picea nordmanniana*, a handsome *Wellingtonia gigantea*, a Fern-leaved Beech, some fine Copper Beeches, &c. A splendid collection of herbaceous plants occupies a border in the garden, and proved of much interest to the botanists present. The party were next conducted round the outside of the mansion-house, which is of quite modern construction. Built into the northern gable there is an old stone bearing the coat-of-arms of a Mr John Nelson, who was executed in Edinburgh in 1588. Proceeding next to the loch, where the party were joined by the Rev. Mr Sturrock, minister of the parish, and Mr Bruce of Slogarie, boats were launched, and some enjoyable hours were spent in sailing about and in exploring the margin of the loch; while some others had a turn with rod and line at the trout with which it is well stocked. A good many broods of Wild Duck and Teal were noticed, and most amusing it was to see the consternation of the parents when the boating parties approached too near the reed beds, where the ducklings hid themselves. In rambling over the moor some of the party noted great quantities of eggs which had had their contents abstracted by these enemies of the game preserver, the Carrion Crows, or "corbies," or "hoodies" as they are locally termed. Amongst these eggs we observed Pheasants', Partridges', Wild Ducks', Black Grouse's, and Wood Pigeons', and in no small numbers either. Even the little Sandpipers, breeding along the margin of the loch, had been laid under contribution, as we noticed several of their eggs lying broken and empty. The majority of the party now, on the invitation of Mr Sturrock, proceeded with that gentleman to the manse, where they were shown what was perhaps the most interesting sight of the day—an aviary containing about forty native and foreign birds, all in vigorous

health and song, and most of them nesting. Artificial fish-ponds were also inspected. In these Mr Sturrock has been engaged rearing various sorts of fish for transference to the Urr, which flows close by; but the severity of last winter has somewhat endangered his plans. After being handsomely entertained in the manse, this party left for Castle-Douglas in time to catch the 7.40 train.

The more enthusiastic Members were still engaged in botanising, insect-collecting, and angling at Corsock, and it was several hours after before they thought of home. Some of these gentlemen went to Castle-Douglas to catch the late train; but the others, including all the prominent Members of the Society, walked home to Dumfries, arriving before the others, who preferred the slower mode of progression by train. We need not add anything more as a proof of the healthy vigour induced by an enthusiastic pursuit of natural history.

The Third Meeting was held on July 7th, when the Members, on the invitation of Mr T. R. Bruce, visited Slogarie and the banks of the Dee in the vicinity of Loch Stroan. Mr Bruce is a Member of the Society, and is a keen observer and student of Nature. A visit to his domain was looked forward to with pleasant anticipations, and these were not disappointed. Owing to the school holidays having commenced in Dumfries, the number of Members who left by the seven o'clock morning train was smaller than usual. Some astonishment was felt that Dalbeattie, Castle-Douglas, and Kirkcudbright sent so few accessions to the party. A grand new museum is about to be erected in the county town of the Stewartry, and it does not augur well for the usefulness of such an institution when the burgh could not send a few representatives to such a meeting. Let us express a hope that the votaries of science and students of local history will not be so backward on future occasions. The museum will only be very partially useful unless free intercourse is promoted among scientists and archæologists in the district. At New-Galloway Station the company were cordially received by Mr Bruce, and Mr M'Andrew, New-Galloway, whose success as a student of botany, and valuable contributions to the science as the results of his observations in the Glenkens, have earned for him a considerable reputation. As

soon as they left the railway station the Members began their observations, and soon found objects enough in the wilding flowers and little insects among the rank herbage of the mossy meadows to excite their wonder and cause delight. Of the habitat of anything rare or strange, from a scientific point of view, Mr Bruce informed the curious. On the old bridge, which formerly united the parishes of Kells and Balmaghie, the little Wall Rue Fern (*Asplenium ruta-muraria*) is to be found. Though common in other parts of Galloway, it is here rare. By the way-side, decking the sloping banks with their pretty blossoms, were clusters of the Meadow Cow-wheat (*Melampyrum pratense*), one of the Scrophulariaceæ, closely related to the Yellowrattle (*Rhinanthus cristagalli*), which is so profuse in our meadows this moist summer. The Rock Rose (*Helianthemum vulgare*), a member of the order Cistaceæ, which exhibits the curious phenomenon of vegetable irritability, was also found in great abundance. When touched, the stamens visibly move. It may not be generally known that a sensitive plant is to be found in the wilds of Galloway. Close to the roadside, on the farm of Duchrae, Mr Bruce directed attention to what is called a Roman camp. There is a deep ditch and low dyke, enclosing an area upwards of thirty yards in diameter. It is covered with trees, and a portion of the dyke next the road seems to have been removed. The circular character of the camp at once raised doubts as to the nationality of the warriors by whom it had been built, and these were not dispelled by Mr Bruce remarking that a rocky islet in the adjoining river also bore marks of having been used for defensive or residential purposes. Where the party turned off the parish road towards Slogarie they were called upon to admire the "Duke of Wellington," a detached mass of rock on a brae not far distant. It bears a slight resemblance to a human figure, with a prominent Wellington nose. A little further on the party arrived at the bridge which crosses the stream connecting Woodhall Loch with the Dee; and Mr Bruce stated that, although the water was then running with a rapid current into the Dee, when the latter was in flood it ran as rapidly back into the loch. A meadow was pointed out in which the glow-worm is often seen in warm, moist evenings.

Arrived at Slogarie, the party were entertained to a sumptuous breakfast, after which they had great pleasure in examining a very complete Herbarium belonging to Mr Bruce. A beautiful

collection of birds' eggs and a large number of birds, finely mounted, were also examined with much interest. The birds have been all procured within the last few months, mostly on the estate; and we understand it is Mr Bruce's intention to present them to the new public museum at Kirkcudbright. Amongst the rare or remarkable specimens are a splendid Raven, a Snow Bunting (procured last January), a Purple Sandpiper, a fine pair of Common Buzzards, a pair of magnificent Peregrines, a Little Grebe, a Long-horned Owl, and a Mountain Finch, or "Cock o' the North," as it is locally termed. The party afterwards visited the well-kept gardens, and a great many interesting plants and trees were pointed out. Mistletoe was growing luxuriantly on various trees, particularly on the Apples. There were fine plants also on Limes and Oaks, and a small plant on a service tree, which led to the rather Moody remark about a parasite on Service. A curious little plant of a spruce (*Abies clanbraziliense*), not above a foot high, but upwards of thirty years old, was next examined.

There were so many objects of interest in the precincts of Slogarie that the party were tempted to linger in the grounds; but the day was fair and pleasant, though the wind was strong and cold for July. A move was made along the banks of "stately Dee." Two of the Members, having their rods with them, proceeded to investigate the ichthyological characteristics of the river. After a few casts of a spinning minnow one ardent student of the gentle art was rewarded with a splendid rise and run from a heavy fish, and congratulated himself on having hooked a splendid Sea-trout. After a little, however, he was disgusted to discover that his captive was a Pike fully two pounds weight. Another small Pike was taken; and the other angler believed he touched a Salmon, of which there are now plenty in the Dee. On the meadows, by the river and grassy flats on the hillside, were countless wild flowers, charming the eye with their beauty of form and colour. Among these were several specimens of the Orchidaceæ—native flowers that rival those of the tropics in their style and beauty of colouring. Among them were found the Early Purple Orchis (*Orchis mascula*), Spotted-leaved Orchis (*O. maculata*), Fragrant-scented Orchis (*Gymnadenia conopsea*), Butterfly Orchis (*Habenaria bifolia*), and the White Fragrant-scented Orchis (*G. albida*). Among the first find of more than ordinary interest in the botanical department were some fine specimens of

Polyporus betulinus growing on an old, rotten Birch. Along the Dee the little Sundews were growing in great abundance, with the remains of their insect food adhering to their viscid leaves. Great quantities of the Scented Fern (*Lastrea oreopteris*) grow on the hillsides, and perfumed the air with delightful fragrance as the party trod the fronds down in walking through them. Insects were rather scarce, owing to the strong wind. There were very few butterflies abroad : a single specimen of the Common Blue, a few of the Little Heath, were secured, and several of *Cænonympha Tiphon* var. *Philoxenus*, which adds Slogarie as a new locality for this interesting variety, the only previously known locality in Scotland being Cloak Moss, Colvend, where it was found by Dr Buchanan White, of Perth. Several other Lepidoptera were subsequently captured, amongst them being *Melanippe hastata*, *Noctua plecta*, a very high-coloured example of the Clouded Buff Moth (*Euthemonia russula*) by Mr Bruce, *Agrotis porphyrea* by Mr Moodie, *Acronycta rumicis*, *Tanagra chaerophyllata*, *Pyrausta purpuralis*, &c. At Loch Stroan the party were rowed across to Clachrum Wood, now the only remaining portion of the great forest which in primitive times is supposed to have covered the whole of Galloway with an almost impenetrable thicket. The trees are not very lofty ; indeed, the sorts are not tall growers, being, with the exception of a few Ashes, principally Rowan, Hawthorn, Birch, and Sloe. One of Rowan is the largest we have seen or heard of, measuring at three feet from the ground nearly nine feet in girth. In wandering through the wood a Roe Deer was started, and one of the party killed a fine Adder. A "Game-keeper's Museum" on a small scale was found on one of the trees, the specimens comprising skulls of the Hoodie Crow, Hawks, and Weasels, nailed up in the usual fashion. A little further down, on the side of Loch Stroan, some large boulders were shown that had been carried across the loch by the ice last winter.

After a short time spent here, the party again embarked and rowed a few miles further up the Dee, the journey being enlivened by some well rendered songs by the well-known editor of the *Kirkcudbrightshire Advertiser*. At the bend of the Dee, not far from Gairloch, the party left the boat to pursue their studies afield. A few of the Members started across the moor to visit the Martyrs' Monument on Auchencloy, which was reached after a stiff walk of several miles amongst bogs and morasses. The

monument is an obelisk about thirty feet high, about seven feet square at the base, and built of the granite of the district. The side bears the following inscription :—

Erected in
Memory of the Martyrs
R. Fergusson, J. M'Mechan
R. Stuart and J. Grier
who fell on this spot 18 Dec. 1684
from a collection made here
on the 16 Aug. 1835
and the profits of the sermon
afterwards published
preached on that day
by the
Rev. R. Jeffray of Girthon
Daniel III. 17 and 18

About a dozen yards off, at the foot of the knoll on which the monument stands, there is a little tombstone about two feet high, the inscription on which is still very easily read, thanks to the labours of "Old Mortality," who renewed the letters. The inscription is as follows on one side of the stone :—

' Here lyes Robert Ferguisson who was surprised and
instantly shot to death on this place by Graham of
Claverhouse for his adherence to Scotland's—— '

And on the other side surmounted by a skull and cross bones, and the legend—

' Mementi Mori '
Reformatione Covenants Nationall and Solemn
League 1684.

As we stood on the steps of the monument we could not help picturing to ourselves the scene enacted here on that cold December morning on this desolate moorland as Claverhouse hunted his poor victims to death. The view from the spot is singularly bleak and wild, and there is not a single dwelling within sight. Numerous Swifts were flying about ; and it was thought likely, as there are no other suitable breeding places within miles, that they have their nests in the granite cliffs on the other side of the glen, which are yet occupied by the Raven and Peregrine Falcon. The whole party met again at the boat, the white waterproof of a non-working antiquary being, as at other times during the day, a useful rallying point for wandered Members. Notes were compared, and it was found that some interesting specimens had been obtained. Mr M'Andrew had gathered a large number of Carices,

including *Carex binervis*, *flava*, *fulva*, *pallescens*, *vulgaris*, *pitulifera*, *canescens*, *vescicaria*, and *ampullacea*. At Loch Stroan the rare moss *Grimmia commutata* was found growing on a stone. *Sanicula Europæa* was found in a wood, where also was captured the rare sawfly *Trichiosoma betuleti* under a birch tree. The Narcissus grows abundantly here, and a number of bulbs were dug up. Perhaps the best find of the day, however, was a clump of *Orobus sylvatica*, an exceedingly rare plant, which was gathered, not in a wood as its name would indicate, but on the meadows close to the water edge. Another plant, *Vicia angustifolia*, was found near the same place. Once more embarking, the whole party of sixteen were rapidly borne down the "dark, rolling Dee" into Loch Stroan, where the stiff breeze had raised waves high enough to have endangered the safety of a less substantial boat. Beneath the viaduct the party partook of luncheon, again kindly provided by Mr Bruce. One of the party, wandering about, came upon an envelope containing two Stonechat's eggs, pinned to a door, and labelled "eggs, with care;" but the mystery was soon solved when Mr Bruce's servant explained that he had taken them from a deserted nest near by.

After luncheon, Mr M'Ilwraith, vice-president of the Society, expressed the thanks of the Members to Mr Bruce for the very handsome way in which he had entertained them, and for the opportunity he had given them of enjoying the splendid scenery amidst which he had guided them during the day, and which had appreciably extended their knowledge of the natural productions of the district.

Rev. Mr Dodds said that much of the day's enjoyment, he fancied, was due to the kind way in which they had been received by Miss Bruce in the morning, and moved a vote of thanks to that lady, which was very heartily accorded.

Dr Gilchrist wished to add, as the oldest Member of the Society, that since he had joined it he never remembered a party receiving such hospitable treatment at a Field Meeting as they had that day experienced.

Mr Moodie said there was another mode of expressing their feelings, and proposed three cheers for Mr Bruce, which were at once most enthusiastically given, the surrounding hills taking up the echoes with "three times three."

Bidding good-bye to Mr Bruce, the party proceeded along the

railway to New-Galloway Station, picking up several plants and a few insects by the way. One of the plants was *Gnaphalium diocum*, which was growing abundantly on the ledges of the rock cuttings; and the most remarkable insect was *Eudorea atomalis*, which has hitherto been found in Perthshire only. The party arrived at Dumfries at 6.30 P.M., having spent a most enjoyable and instructive day.

The Fourth Meeting was held on August 2nd, the place chosen on this occasion, through the kind permission of the agents, Messrs Walker & Sharpe, being the estate of Mabie. Few estates in the Society's district can boast of greater attractions for the naturalist, for whether he be devoted to Geology, Botany, or Zoology, he will never fail to find something to gratify his tastes. Through the extensive copses the Roe Deer still wanders unrestrained; and the Buzzard breeds amongst the rocks on the hill tops. The ledges of the Blackcraig once held the eyrie of the lordly Peregrine, where also not many years ago a Golden Eagle was seen sitting on each successive morning for about a week. A fact of great interest also for the ornithologist is that the Woodcock has been known to breed here in former years. This season is no exception, for only a few days ago a brood of four young Woodcocks was seen there by the Secretary and another Member of the Society.

The party, having travelled by train to Lochanhead Station, proceeded first to Lochaber, where an hour or two was pleasantly spent in collecting botanical and entomological specimens. Foremost of course in interest were the various "insect-eating" plants, the *Droseras* and *Pinguiculas*. Of the former genus the scarce *D. anglicum* was growing along the loch margin in comparative abundance. A somewhat unusual but extremely pretty sight was the numerous groups of small Dragon Flies (*Agrion elegans*), of a pulverulent blue colour, which were glancing about in the bright sunshine literally "seeking whom they could devour," for more voracious creatures it would be difficult to find. Near Craigbill the party passed amongst a number of ice-borne granite boulders, each or all of which would have furnished Dr Gilchrist with a text for a geological discourse had he been present. Many regrets were expressed at the Doctor's absence, and much sympathy with

him in his severe illness, arising partly from over-exertion at the last Field Meeting. On reaching the top of the hill, the party found a brilliant floral spectacle spread out all around, over many acres, the summits of the surrounding hills being completely covered with the beautiful purple flowers of the ling (*Erica tetralix*). Here the party rested for a short time, and a more charming place at this season of the year could scarcely be imagined. The view from this point is most striking, and includes a wide stretch of country of richly picturesque features. The Nith directs the eye southward amongst lands diversified as a garden, and points to the deep blue mass of Criffel, at whose feet sleeps in calm beauty the silvery Loch Kindar, and beyond to the wide expanse of the Solway and the dim outlines of Skiddaw and other Cumberland mountains. To the northward a broad valley stretches away till it becomes narrowed and shut in by cultivated hillsides, and overhung at the extremity by the dark, conical form of Queensberry. Towards the west, Lochaber and Lochrutton are the most striking points of the landscape, which is engirdled by a confused mass of hills stretching far away on the horizon. Proceeding down the glen towards Mabie House, numerous insects were secured, amongst the butterflies being the Grayling (*Satyrus semele*), which nowhere in this locality occurs more abundantly than on Mabie; the Ringlet (*Epinephele hyperanthus*); Small Heath (*Cænonympha pamphilus*); the Meadow Brown (*E. Janira*); Dark Green Fritillary (*Argynus aglaia*); the Pearl-bordered Fritillary (*A. Euphrosyne*); the Small do., do. (*A. Selene*); the Common Blue (*Lyceana icarus*); and Scotch Argus (*L. Artaxerxes*). Amongst the moths the best were the Mountain Carpet (*Larentia cæsiata*), the Concolorous (*Tapinostola fulva*), and the Purple and Gold (*Pyrausta purpuralis*). A fine specimen of the Viviparous Lizard (*Zootoca vivipara*) was also secured, and the best finds made by the botanists were some pretty lilac and white varieties of *Polygala vulgaris*. At Mabie House the party were shown over the premises, and some parts of the ancient dwelling-place, on which the present mansion is built, were pointed out. The party next examined the fine old canoe which was found when draining Mabie Moss. It is in fine preservation, and a new hut has recently been erected over it, which will enable it the better to resist time's destroying hand. It is of oak, and measures about fourteen feet in length and about three feet in

breadth, and, from some peculiarities of construction, apparently was the property of a chief or person of distinction. Some fine trunks of Bog Oak were dug out near the same place where the canoe was found; one of the trunks which was measured was over 70 feet in length and about $2\frac{1}{2}$ in diameter. After a walk through the fine gardens at Mabie, which are in the occupation of Mr James Service, nurseryman, the party next visited the Picts' Knowe, an ancient British camp still in fine preservation, as when Mabie Moss was reclaimed, near the centre of which it is situated, the camp was fenced off so as to secure it intact. On the hilltop to the westward can still be traced a similar-shaped fort or camp, which very probably was the "watch tower" or "look out" of the family or tribe dwelling at the Picts' Knowe, then surrounded with water, as is evident from the finding of a canoe of the above dimensions in close proximity.

The party next visited St. Queran's Well, and the stone seats and the cooling water were very welcome after so much walking. St. Queran (or Querdon, Guerdon, Quergan, or Jardan, &c., as it is variously given) was a Scottish saint, supposed to have been connected with the earlier forms of the Abbey of Holywood, and the date assigned to him by Butler is 9th September, 876. The Society possesses a number of coins found in the well many years ago by the then tenant of the farm of Barbush, which were doubtless the offerings of invalids, as was usual at the holy wells of old times. After about an hour's further walking, the party reached Troqueer Holm, where they were received by the President, J. Gibson Starke, Esq. After partaking of refreshments, Mr Starke's private museum was inspected, catalogues of the collection being presented to those present. A magnificent collection of Coins; of Land and Fresh-water and Marine Shells from various parts of the world; a very complete collection of British Ferns, Sedges, and Grasses; Curiosities from Jamaica and Ceylon; and a vast number of rare old Books, Autographs, and other objects of interest too numerous to mention were examined; and after an hour or two had been thus pleasantly and profitably spent, Mr J. H. Maxwell of the *Kirkcubrightshire Advertiser* proposed a vote of thanks to Mr Starke for his great kindness in throwing open his museum to the Society, which was very cordially awarded. Mr Starke having briefly responded, the party took leave of him, highly gratified with the day's proceedings, which were of the most pleasant description.

The last Meeting was held on September 4th at Comlongan Castle, and was well attended; but there were no notes taken of the day's proceedings.

FIELD MEETINGS OF 1880.

The First Field Meeting was held on May 4th at the Thornhill Museum, to which the Society had kindly been invited by Dr Grierson. The party left Dumfries by the mid-day train, and were joined at the museum by those Members residing in the Thornhill district. They were first conducted through the grounds, which are profusely studded at the present time with immense numbers of Daffodils. Many varieties are grown here of these beautiful spring flowers, which are seldom met with nowadays. It was yet too early in the season for a proper examination of the many rare and curious plants cultivated by Dr Grierson. The fine series of ancient Querns and old Celtic Crosses was minutely inspected, and much interesting information as to the history of the various specimens was given. The party were next conducted over the vast collection of Natural History and Art specimens, and of Antiquities contained in the museum buildings. Prominent in interest was a large assortment of articles recently obtained from British Guiana, consisting of some very formidable Boa Constrictors and other serpents, many of them over twenty feet in length; numerous brilliantly coloured birds and insects; and strange reptiles and rare quadrupeds. Some of the specimens in this collection are unique in European museums. A small box of the deadly Wourali (or Wourari) poison was also sent amongst the other things. The composition of this celebrated poison is now well known as the product of various species of *Strychnos*; but it for a very long time baffled the most experienced travellers and naturalists, the secret being so well kept by the "medicine men." So deadly is it in operation that the slightest prick of an arrow previously dipped in it is sufficient to cause death in any animal in two or three minutes; and a strange thing is that these animals thus killed are used as food. A beautiful collection of birds, reptiles, and mammals has also been recently added to the museum from South Africa. Amongst these there is a very fine specimen of the "Bushmaster," a ferocious serpent, which has the singular

habit of boldly advancing against anyone approaching its haunts. It is greatly dreaded by the natives, who will not face it at all. Round the front of the gallery is arranged a large number of skulls of animals, amongst which we noticed fine skulls of the Wapitu Deer, the Irish Elk (found in the bed of the Nith below Dumfries), the ancient Caledonian Ox (*Bos primigenius*), Lions, Tigers, Leopards, and a beautiful series of skulls of the various breeds of sheep. The bearing of the latter on the theory of natural selection was pointed out very clearly. At the east end of the gallery are hung some very fine specimens of the singular weapons of the Sword-fish, Saw-fish, and other monsters of the "briny deep." We must not omit to mention the very large "tooth" of a Rorqual also exhibited here. It resembles a flag-staff in size and appearance, and we fancy would be very effective indeed even against the largest whales. After the party had feasted their eyes on the many wonderful things around them, they were called to the central table, where the Doctor unwrapped from a nice clean towel what he stated was the most wonderful "thing" he had ever possessed. We may call it a lamb, but a further description must come from Dr Grierson himself. Such description and deduction to be made from this physiological curiosity we will doubtless have shortly. Adjourning to the garden again, the party were served with coffee and tea, and an enjoyable hour was spent in scientific discussions. On again entering the museum, Mr J. H. Maxwell of the *Kirkcudbrightshire Advertiser* expressed the great delight which the Members had felt in examining the many objects before them, and thanked the worthy Doctor for his hospitality. Dr Grierson, in replying, said that his object in maintaining the museum was purely an educational one, and that he felt amply rewarded when he saw that his endeavours to spread a knowledge of the wondrous things of creation were appreciated. He had never conducted a party over his museum that showed more sympathy with his work, and he hoped that not only those Members who had visited him that day, but all those prevented from coming, would not miss an opportunity of waiting on him. Refreshments were again served; and after bidding the Doctor good-bye and taking another look round, the party retired, having spent a pleasant and most instructive afternoon.

The Second Meeting was held on June 2nd, the place selected for a visit on this occasion being the beautiful shore of Colvend. The weather being somewhat unfavourable at Dumfries, there was a smaller attendance of Members than on previous visits of the Society to this very interesting district. The day cleared up well in the afternoon, however, and the weather became warm and pleasant, and as no rain had fallen at Colvend the grass was quite dry and comfortable to walk upon. The party left Dumfries by the 12.20 train, and at Dalbeattie were joined by contingents from that neighbourhood and from Castle-Douglas. The latter included Mr David Kennedy, son of the world-famous Scottish vocalist. Mr Kennedy is sojourning at present in Castle-Douglas, and proceeds shortly to the Cape to become manager of the *Natal Witness*. Entering the waggonette from the Maxwell Arms, the journey towards Colvend commenced just as the rain stopped, and the sun peeped out for a little. The first halt was made at Richorn to inspect a place where grows a large quantity of the Lily of the Valley (*Convallaria majalis*). Whether it is a true wilding here or an "escape" is disputed. We have seen it growing in a similar situation at Slogarie, but there also it has not been definitely ascertained to be a true native. We were informed that the patch at Richorn very rarely flowers: this is probably the case, as only one or two little sprays could be found. The next interesting incident was the discovery, as the waggonette passed underneath the tree, of a nest of a Golden-crested Wren attached to an overhanging branch of a Silver Fir. The beautifully constructed pensile nest of this the smallest of British birds is seldom seen except by those interested in these matters, and very rarely indeed is it to be seen so near a frequented road. We were glad to observe that it was out of the reach of mischievous boys. On passing the farm of Auchenhill, Mr Matthewson, Dalbeattie, informed the party that on the barn wall there is (or was) a female bust built in, which used to be an object of dread to the children of the locality. It was known as the "Lady Blanche;" and Mr Matthewson suggested that very probably there was some connection between this figure and the well-known effigy of the "Nun Slab" in Dundrennan, which has been so often under discussion. We trust that Mr Matthewson will investigate the subject; and as he is so intimately acquainted with the folklore of the district, he will doubtless be able to throw some light

upon what is confessedly obscure. A stoppage was made at the manse, where the party was received in the kindest possible way by Mr and Mrs Fraser. After partaking of a bounteous supply of refreshments, Mr J. H. Maxwell of the *Kirkcudbrightshire Advertiser* expressed the keen pleasure of the Members at being again amongst the "Craigs o' Co'en"—one of the most beautiful portions of the Stewartry—and returned on behalf of the Society their grateful thanks for the hospitable manner in which they had been entertained by Mr and Mrs Fraser. Mr Fraser, in replying, said that when the Society first visited him (on 4th August, 1863) there were upwards of thirty Members present, but not one of those who were there on that occasion did he see before him. Most of those then present were dead now, but he was glad to see another generation arising with all the old enthusiasm and with the great advantages of increased facilities for gaining a knowledge of their local natural history and antiquities. Adjourning to the garden, Mr Fraser's interesting collection of hardy plants was examined, but for the majority of them the season was yet too young to see them in flower. *Aquilegia glandulosa*, a rare Columbine, was in beautiful bloom. Another fine plant in flower was the *Ramondia pyrenaica*, with large purple flowers rising from rosettes of deep green foliage. A grand specimen of the *Araucaria imbricata* was much admired, but the arboricultural feature of the garden is a fine row of Hollies with straight, well-grown stems thirty to forty feet in height. We also noticed a fine plant of *Lilium scovitzianum* in flower, the delightful fragrance of which was quite perceptible all over the place. The valuable collection of Auriculas—we believe the only one in the South of Scotland—was just out of bloom, and only one or two flowers remained. Its inspection would have added another to the many attractions of this "manse garden." Again seeking the waggonette, the party were driven to Rockcliffe, where the magnificent house in course of erection for Christopher Morris, Esq., was visited, and described by the Clerk of Works. Leaving here, the Members broke into detachments to follow their particular inclinations—some to visit the site of the Fort on the Castlehill Point; and others to collect Mollusca, Insects, Plants, &c. Two of the Members, both enthusiastic ornithologists, stripped off coats, boots, and other *impedimenta*, and scaled the cliffs like practised cragsmen. They were soon busy high up on the rocks examining the contents of sundry Jackdaws' and other birds'

nests placed on various points inaccessible to all but those possessed of strong nerves and strong muscles. The Jackdaws have become extremely numerous there, and we are afraid have now driven from this part of the Stewartry coast the last stragglers of that interesting bird the Chough. This bird is probably a fast-decreasing species in every part of Britain which it yet occupies, and it is the prevailing opinion that the Jackdaw, though a member of the same family, is in some way inimical to it. In these cliffs, living in close proximity and apparently in harmonious friendship, were the households of Owls and Kestrels. The crevices at the bottom were evidently in some instances occupied by the Shieldrake (or *Stockannet*, as it is locally termed). We have every reason to believe that these beautiful ducks are increasing in number, thanks to the benignant clauses of the Wild Fowl Protection Act. A good many pairs were seen during the afternoon. The breeding place once occupied by the Cormorants, and still known as the "Cormorants' Roost" or "Doucker's Bing," has been deserted by these birds for many years, and is now tenanted by the Common Gulls (*Larus canus*) in large numbers. Until lately a number of the Herring Gulls (*L. argentatus*) also bred here; but they have shifted their habitation to other quarters nearer Douglas Hall. At the latter place we observed several Rock Doves, and one of the party had the good fortune to see a pair of Peregrine Falcons. Under the experienced guidance of Mr Fraser, the botanists secured specimens of most of the peculiar plants of the shore, but it was just early enough to find them in good condition. The scarce plants to be found betwixt Rockcliffe and Douglas Hall have been so often enumerated that it would be superfluous to give a list now. We may, however, state on the authority of Mr Matthewson that the Royal Fern is still found in Colvend, but to prevent its threatened extinction we will not divulge the exact locality. A goodly number of Mollusca were picked up during the walk, amongst which were the following, viz.:—*Mya truncata*, *M. arenaria*, *Solen ensis*, *Tellina solidula*, *Mactra solida*, *Artemis exoleta*, *Cyprina islandica*, *Cardium edule*, *C. echinatum*, *Mytilus edulis*, *Pecten opercularis*, *P. varius*, *Ostrea edulis*, *Pattella vulgata*, *Littorina littoralis*, *L. littorea*, *L. rudis*, *L. neritoides*, *Turritella communis*, *Purpura lapillus*, *Nassa reticulata*, and *Buccinum undatum*. All the members of the party having reassembled at Douglas Hall, leave was taken of Mr Fraser,

and the homeward journey was begun by way of St. Lawrence's Chapel and Cloak Moss. The latter had the appearance of a newly-fallen shower of snow from the abundance in which the white panicles of the Cotton Grass (*Eriophorum*) were displayed. With song and joke time passed quickly enough, and the Maxwell Arms Hotel was reached about nine o'clock.

Before the Castle-Douglas Members left to catch the train, the Secretary (Mr R. Service) said that, as most of them were aware, it had been resolved at the previous Field Meeting to present Dr Grierson, Thornhill, with a copy of "Waterton's Wanderings in South America," as a very slight acknowledgment of his kindness in allowing Members of the Society to visit the Thornhill Museum free of charge, or, in other words, refusing to take any admission fee from Members. The money subscribed had been left in his (Mr Service's) hands, and he had procured and forwarded the volume to Dr Grierson, and he had received a reply, of which the following is an extract:—"How very kind it is of the Members of the Society to send me 'Waterton's Wanderings,' and I accept of their kindness with a feeling of special gratitude. I take it as a token of sympathy with the aim of my Museum. The study of Nature has its own reward, but sympathy with the study is as gleams of sunshine. Waterton's book will be of material use to me; I will find described in it most of the objects I have got from British Guiana."

The Dumfries Members afterwards partook of tea together, and came home by the late train, highly delighted with the day's proceedings and laden with huge bundles of ferns, wild flowers, and other spoils.

The Third Meeting was held on July 10th, the place selected for a visit on this occasion being the romantic parish of Durisdeer. A large party left Dumfries by the 8.25 A.M. train for Carronbridge, and were joined at Thornhill Station by several Members of the Society of Enquiry, whose aid as experienced botanists was much appreciated during the day. Much regret was expressed at the absence of Dr Grierson, whom an unfortunate engagement prevented from being present. At Carronbridge Station the party were met by Mr Thomson, Durisdeer Village, who had kindly consented to act as guide, and whose services amongst these apparently interminable hills were indispensable. The

route lay over the farm of Drumcruil (permission to traverse which had been readily granted by Mr Dickson), where an ancient fort was pointed out at Langknowe. The old Church of Kirkbride was seen on the left above the farm of Coshogle. It is now in ruins, only a small portion of the walls remaining; and it is very desirable that the unique features of this interesting relic of the past should be preserved from further decay. A little further on the beautiful Glen of Enterkin was reached. The majority of the Members descended this deep ravine with the intention of visiting the cairn of Lagdow, which is said to commemorate the spot where a Covenanter of the name of Dow was shot by Sir Robert Grierson of Lag; but the majority of antiquaries doubt this tradition, and think that the name of Lagdow Cairn simply means "the cairn of the black hollow." They were, however, diverted from their purpose by a drenching rain, which came down in torrents, and they took refuge up the glen of Auchenlon Burn. Here they had the good fortune to fall in with a profuse growing mass of the rare Filmy Fern (*Hymenophyllum Wilsoni*), which was collected with great delight, as several of the party had gone for the sole purpose of gathering this interesting species. Enterkin and other glens in that neighbourhood have long been famous for producing this fern, and the locality is given in all the old "Floras." A little further up, in a beautifully situated nook, was found a nest of the Dipper, from which the young "white breasts" rather unceremoniously fled as soon as disturbed. On the boulders over which the water was dashing a number of pretty Fresh Water Sponges were secured of the same species as was found in the Dee a year or two ago, when the Society visited Threave Castle. That scarce and beautiful snail the *Helix arbustorum* occurred in this glen also in great profusion, and a number were collected. We saw a quantity of this species recently in Dr Grierson's garden, where they had quite acclimatised, and thrive well. During a blink of sunshine, as the party emerged from this glen on to Thirstane Hill, vast numbers of the "Chimney Sweep" Moth (*Tanagra chaerophyllata*)—a little species, sooty black in colour—was very noticeable. As far as the eye could reach they were to be seen in myriads flying about amongst the bracken. At the foot of Steygail the two parties again met, and notes were exchanged. The Devil's Dyke had been examined—that portion of it which runs towards Dalveen. It is difficult to imagine what this dyke could

have been intended for, unless it was a mere tribal boundary in pre-historic times. Fragments of it are numerous in Durisdeer and neighbouring parishes. A small quarry of the new red sandstone was also visited. The rain still kept pouring on in torrents, and it was discussed anxiously whether the party should go further or return. The majority resolved on the former course, and most of the party decided on going to the head of Enterkin Pass at any rate, as all were as wet as they could be. A cairn at the foot of Steygail was pointed out as marking the spot where a shepherd was killed by falling down the mountain in a snow storm a short time since. Near the Kelpie's Linn some very fine bunches of the Parsley Fern were secured. The Moonwort Fern also grows there in some abundance. The curious Fescue Grass (*Festuca vivipara*) was also met with. Dotting the pathway up to the head of Enterkin were many little tufts in full bloom of the pretty, pink-flowered *Sedum villosum*. The only other plant met with of note was the Cut-leaved Saxifrage. After passing the Kelpie's Linn the pass became very steep, and the party had to look after their footing, for a single slip would have sent them down hundreds of feet to the bottom of the glen. Dr John Brown, as quoted in Ramage's "Drumlanrig and the Douglasses," thus describes it in language which we cannot hope to imitate:—"A few steps and you are on its edge, looking down giddy and amazed into its sudden and immense depths. We have seen many of our most remarkable glens and mountain gorges—Glencroe and Glencoe, Glen Nevis (the noblest of them all), the Sma' Glen, Wordsworth's Glen Almain (Glenalmond)—where Ossian sleeps—the lower part of Glenlyon, and many others of all kinds of sublimity and beauty; but we know nothing more noticeable, more unlike any other place, more impressive, than this short, deep, narrow, and sudden glen. There is only room for its own stream at the bottom, and the sides rise in one smooth and all but perpendicular ascent to the height, on the left, of 1895 feet—Thirstane Hill; and, on the right, of 1875 feet—the exquisitely-moulded Steygail, or Steep Gable, so steep that it is no easy matter keeping your feet, and if you slip you might just as well go over a *bona fide* mural precipice." The place where a small party of Covenanters rescued some of their brethren from the hands of a large body of dragoons was passed near the top of the ascent. The dragoons, if we are to believe the somewhat traditional accounts of the affair which have been handed down,

had to surrender their prisoners at discretion, and were glad to escape with their own lives. We can well believe that dragoons would be rather hampered in their movements in such a place. The rain had ceased when the party reached the summit, and a halt was made and luncheon disposed of. The view from this exalted station is enchanting in the extreme, and lovers of fine scenery may here feast their eyes to their hearts' content. The clouds, coming down in great masses right on the heads of the party, warned them not to dally, and the "vigorous brigade" determined on going further still, and off the half of the party went for the lead mining works at Leadhills. Here they were kindly received, and through the courtesy of the manager (Mr Newbigging) they were shown the "crushing" and "washing" process. Some fine specimens of ores were presented to them, which excited the envy of the Members that lagged behind. Meanwhile the party left at the head of the pass had turned down the glen again and made for Dinabid Linn, at the head waters of the Carron. This is one of the most charming spots in this beautiful district, and the array of wild flowers along the side of the Linn was very tempting; but time was pressing, and the party hastened on into Dalveen Pass near the farm of Upper Dalveen. The rain here had been excessive, and all the little burns had become torrents of turbid water, which came rolling down the glens in all directions. The treeless character and bright green sward of these majestic mountains give them a very peculiar appearance, and the burns can be seen up to their fountain-heads. The foaming torrents that were falling over some of the linnns were extremely beautiful. Getting on to the turnpike road which runs along the Dalveen Glen, the party were able to walk in comparative comfort, as so many swollen burns had to be jumped or waded as to become very laborious. Burns was connected intimately with this district, and Dalveen Pass has been immortalised in his song:—

"Last May a braw wooer cam' doon the lang glen,
And sair wi' his love he did deave me."

And in a subsequent verse he takes notice of the farm of Gateslack:—

"But what wad ye think? in a fortnight or less,
The deil tak' his taste to gae near her!
He up the Gateslack to my black cousin Bess;
Guess ye how, the jad! I could bear her, could bear her;
Guess ye how, the jad! I could bear her."

As the party came down the glen many birds peculiar to such localities were met with. We have seldom seen the Wheatear so numerous, and the family parties flitting about were very conspicuous, as the white tails turned up when flying. Large numbers of Whinchats and Stonechats sat "chacking" at the party from the tops of the stone dykes. We were surprised to find the Common Sandpiper numerous here. Several of the Common Bunting were noticed, although it is anything but a common bird in Dumfriesshire. Several pairs of the Ring Ouzel, or Mountain Blackbird, were also seen; and one could not help noting how well their wild musical calls harmonised with their surroundings. When this party arrived at Durisdeer Mill they found to their disgust that another detachment had been there before them and cleared out all the "refreshments." Some of the Members had by this time gone up to see the marble tombs at Durisdeer Kirk, and it is to be regretted that so few of the members of the large party that set out in the morning had an opportunity of seeing such beautiful specimens of the sculptor's art. It is believed that the figures are the work of Roubilliac, who was the most distinguished sculptor of the period (1711) when James, Duke of Queensberry and Dover, died, and of whom and his Duchess these splendid figures are a memorial. Another party of Members had an opportunity of seeing the little round camp on the farm of Drumcruil, and which was probably a rallying place of the ancient Selgovæ. This finished the special work of the day, and in twos and threes the party again became united, and all reached their destinations in a decidedly fagged condition.

The Fourth Meeting should have been held on August 12th, when it was intended to visit the shoreline from Cummertrees to Clarencefield; but only two or three Members put in an appearance at the time appointed, and the meeting did not take place.

The last Field Meeting of the season took place on September 5th, and proved in every way a fitting termination to a successful and enjoyable series. The Newabbey district was chosen for a visit on this occasion, and the weather being as bright and hot as could be desired, the largest party of the season turned out,

leaving Maxwelltown shortly after eleven o'clock in two waggonettes. The fields being for the most part cleared of stooks, the large flocks of migratory birds occupying them, preparatory to leaving for southern climes, were seen to advantage. At one part of the way a curious habit of the Starling, and very unlike the bird's usual habit, was being briskly indulged in. We refer to that myotherine habit of this bird, which is said to be developed only in hot seasons, of hawking backwards and forwards for flies after the manner of swallows. Several times the Blackheaded Gulls were noticed at the same business, but with them the habit is confirmed. While passing the extensive woods of Shambellie a brisk look-out was kept for the Siskin, which is known to breed there, but it was not seen on this occasion. After a brief halt at Newabbey village, the party drove on till the farm of Ardwall was reached. Here the vehicles were left, and the company divided—the corpulent and weakly to explore the banks of Loch Kindar and vicinity; and the vigorous and enthusiastic to make the ascent of Criffel. The latter party were rewarded by finding a small colony of the Parsley Fern (*Allosorus crispus*) shortly after the ascent commenced. It is rather remarkable that this fern, although abundant in Dumfriesshire, is comparatively rare in the Stewartry; but the different geological formation doubtless explains this. The climb to the summit was a most toilsome one, owing to the suffocating heat; at least one of the party had to own himself beaten and return; and several others, it was apparent, preferred punishing themselves rather than be the subjects of the jokes of their more muscular companions. There was little of more than ordinary interest to be noted, with the exception of the unusual abundance of the Titlark (*Anthus pratensis*). A flock of more than sixty was seen together, and smaller parties were very numerous. The ascent having taken up so much time, but a short stay was made at the top, and the descent was of the usual hurried description. The other party meanwhile had been employing the time in botanising and other congenial pastimes near Loch Kindar. Application for the use of a boat to examine the two small islands had unfortunately been omitted in the arrangements for the meeting, so that the numerous Cormorants (or "Co'en' Elders," as they are locally termed) were left in undisturbed possession of their resting place. These birds evidently find here an abundance of food; but it is to be hoped they confine their attention to the eels, and leave alone the

famous trout so well known to local anglers. However, on a previous visit of the Society to Loch Kindar (in May, 1867) these islands were examined, and in a report of the meeting it is stated that "on one of the islands stand the remains of one of the few pre-Reformation churches, while the other may have been a lake dwelling." A number of the Members, on returning to the village, visited the magnificent ruins of Sweetheart Abbey. We are glad to say that these ruins are now being cared for in a manner which we would be glad to see imitated by the proprietors of all the other ancient buildings in the district. A little past five o'clock all the Members had again assembled at the Commercial Hotel, where they sat down to tea, and it is needless to say that after the exertions of the afternoon the repast was done ample justice to. The return journey was made by way of Lotus, where the old canoe was inspected. It was discovered in the loch there about twelve years ago, when the water was unusually low. The bow was taken off and sent to the National Institution in Edinburgh, and it is a matter for regret that the remaining portion is fast disappearing—partly owing to the weather, and partly to the vandalism of visitors, who have been chipping pieces of it away. [Mrs Hyslop of Lotus, a few days after the meeting, kindly presented the canoe to the Society.] The crannoge on the north end of the loch was to have been visited, but owing to the lateness of the hour it was agreed to defer its examination till a future opportunity. We understand that on one side the oak piles on which it was built are quite visible. It is of large extent and some large timber is growing upon it. It can be reached from the side when the water is low by means of a row of stepping stones. Quite close to it a bronze pot and some other things were fished out lately. It is desirable that these articles should be seen and reported on by some competent antiquary. We believe that Loch Arthur, and in fact nearly all the Stewartry lochs, would well repay systematic explorations. Crannoges can be detected in a great many of them; and if they were carefully examined, much light would be thrown on the pre-historic inhabitants of the district. On the way home the party were much interested in watching the frequent discharges of lightning from a cloud which was just visible over the Mabie hills. From this point it is very probable the widely extended thunderstorms of Sabbath morning and Saturday night originated. The party reached Dumfries about half-past eight

o'clock, thoroughly pleased with the day's enjoyment, for which the Society's thanks are due to Mr Oswald of Cavens, Capt. Stewart of Shambellie, and Mrs Hyslop of Lotus, for kindly granting permission to visit their respective estates.

Mr Lennon, Brooke Street, handed in the following memorandum with reference to the insects he collected:—"I never remember seeing the wild bees and other insects so very scarce as they have become this season since the hot, dry weather set in. On Saturday the only bees visible were *Bombus lapidarius*, *B. muscorum*, *B. lucorum*, and *B. virginalis*. Along with the scarcity of insects, a scarcity of the usual flowers of the autumn months is noticeable; almost the only wild flower in bloom just now is the *Scabiosa arvensis*—a very favourite flower with various orders of insects. The prevailing lack of insect life extends to the Coleoptera, which are not usually much affected by extremes of temperature; and the following were nearly all the species I could find:—*Elaphrus riparius*, *E. cupreus*, *Broscus cephalotus*, *Anchomenus albipes*, and *A. marginatus*. These were all collected under the stones at the water edge. The water beetles were fairly plentiful, and of this interesting class I dredged the following scarce species:—*Haliphus fulvus*, *H. flavicollis*, *Hydroporus quinquelineatus*, *H. novemlineatus*, *H. pictus*, *H. lepidus*, *H. depressus*, and *H. assimilis*. The Lepidoptera, with the solitary exceptions of *Polia chi* and the Little Copper butterfly, were conspicuous by their absence."

TRANSACTIONS.

The authors of the following papers are alone responsible for the opinions expressed.

LOCAL ANTHROPOLOGY. By WILLIAM M'ILWRAITH.

Read November 7th, 1879.

* * * * *

From this brief historic sketch it will be apparent, we think, that the archæological remains of this district should possess more than ordinary interest. Eskdale and Annandale, for instance, were on the highway between the southern and northern parts of the kingdom. Through their dales the successive invading races would advance northwards; and then, as their power waned and they retired, the more ancient tribes would stream southwards. Nithsdale, stretching more westwards than northwards, was debateable ground forming the eastern boundary of Galloway; and the latter district, though always Celtic in the main, and preserving a kind of individuality and independence, was frequently invaded. Of all this, interesting evidence should be found in the character of the people, in their language and customs, and in the archæological remains to be found in the district. So it has; but much remains to be gathered, and sifted, and utilised by this and kindred local societies. Let us look for a little at the evidence we now possess. In the course of time the races of men in the south-west counties have become amalgamated, but the close observer cannot fail to notice that there is a general difference between the people of Dumfriesshire and Galloway. The former possess more of the Anglo-Saxon elements in their constitutions. This is especially noticeable in the common people, among whom wide changes of residence have not been frequent. Red-haired, fair-haired, fair-skinned, blue-eyed, tall men and women are more frequently to be met with in Eskdale and Annandale than in Galloway; and we have a majority of the people in the latter district dark-haired, swarthy, black-eyed. In their temperaments also a difference may be discerned. And

so also in the prevailing patronymics : such cognomens as Beattie, Bell, Carruthers, Carlyle, Graham, Halliday, Irving, Johnstone, Jardine, Kellock, Scott, Telford, are common on the Western Border ; while in Galloway M'Culloch, M'Creadie, M'Dowall, M'Illwain, M'Meehan, M'Lelland, M'Quisten, are more frequently to be found. It is interesting, in daily intercourse with those around us, to study in persons bearing Anglo-Saxon or Celtic names the characteristics of race.

When we come to consider the language of the district, a most attractive field of study is revealed. Were a collection made of words and phrases peculiar to, but fairly recognised as belonging to the popular speech of Dumfriesshire, and compared with a similar list from Galloway, it would be seen that a considerable and marked difference obtains. In M'Taggart's *Gallovidian Encyclopedia* many words and phrases will be found which an Annandale man would think strange ; and Wigtownshire men, attending Lockerbie Lamb Fair to purchase stock, remark upon the uncommon expressions of the shepherds who there have charge of the hirsels. The history of the various localities indeed may be traced in the words used to denominate their features or the prominent natural objects in the landscapes. These have in many cases remained unchanged since the earliest times. The word Urr, for instance, the name of the dividing stream between two of the nations of Glasgow University, is said to be a fragment of the language of the most ancient inhabitants of Galloway. It lies, indeed, in our modern language like a boulder on the surface of the ground, with its antiquity recognised, but its history concealed in the past. *Urr* means "water." So does *Esk*, *Æ*, and *Dee*—the names of other local rivers—but why is there such a distinction ? Combined with other words, and in use in names of places, we find such Celtic root-words as *Gleann*, "a glen," in Glenzier in Canonbie, *Glenæ* in Tinwald, *Glenskelly* in Tynron, *Glenlee* in Kells, *Glenkitten* in New Luce, and *Glengyre* in Kirkcolm : the prefix, you will observe, ranges from the eastern confines of Dumfries to the western side of Wigtownshire. *Ard*, meaning "high," and used to indicate "a height," is found in the Ardwells of Galloway. *Dun* or *don*, "a hill-fort," is common ; *pol*, "a pool or burn," is found in that form in Poltanton, Wigtownshire, and used generally in Dumfriesshire in the softened form "pow ;" *Corse*, "a bog or marsh ;" *Car* or *caer*, "a fort ;" *Knock*, "a hill ;" *Bal* and *Bar*, "a dwelling-place" (1), &c. It

would weary you to multiply illustrations ; but bear these words in mind, and you will not go far till you come upon them in use. We have shown that different kinds of Celtic words are used to designate rivers. So in regard to hills we have the forms *Pen* and *Coomb*. White Coomb is the highest hill in Dumfriesshire : it is in the upper part of Moffat parish. In the same range of hills is the lofty peak of Ettrick Pen. In Galloway the loftiest hills are *Cairns*—Cairnsmore of Dee, Fleet, and Carsphairn ; Cairnpyat in the Rhins ; and *Meouls*—the Meoul in the Kells range, and Mid Moile, the highest hill in Wigtownshire. In regard to the leading features of the principal districts of the country similar differences in the distinguishing appellations may be traced. Now, just as the geologist by examining a piece of rock from any of our lofty hills is able to tell its probable age and the manner of formation, so the philologist by analysing the place-names is able to state the probable age of each, and give us some account of the race by which it was conferred. In this way it is determined that “Coomb” and “Pen” are ancient British, and must have been applied to the heights bearing them at a very remote period. Just, however, as the lapse of time has smoothed and rounded the beautiful green hills around them, leaving the bare peaks, so has it worn away the old place-names, leaving “Coomb” and “Pen” standing out alone in suggestive prominence.

When we come to examine the titles used to distinguish hillocks, dwelling-places, burns, little glens, and fields, we find a marked difference between those common in Dumfriesshire and Galloway. In the former, words used for the lesser eminences are—*hill, fell, law, berry, dod, head, top* ; for dwelling-places—*town, by, fauld, hay, head, and park* ; for streamlets—*water, burn, syke, and grain* ; for deep clefts in the hills—*cleuch, heugh, and scaur* ; for more open vales—*hope, gill, beck, syke* ; for a plain—*holm, haugh, lea, and field*. In Galloway such place-names are comparatively unknown. There the eminences are *cairns, craigs, and duns*. *Bal, tor, bar*, is the prefix used to indicate heights and fortified homesteads. Within a short distance of each other, in Penninghame parish, we have the farmsteads of Barraer, Barwhirran, Barlauchlan, Barvennan, Barburchany, Barnean, Barskeoch, Barnearnie, Bartrostan, and Bar. It is to be remarked that words indicating different kinds of enclosed, cleared, and cultivated ground are absent, from which it may be inferred that those who used the language (Celts) were not familiar with agriculture. Words

distinguishing the different kinds of glens and pastures are also wanting. The first set of names, it is plain, are Teutonic, and the second Celtic. There is thus, in the distribution of these place-names, clear evidence furnished that the Teutons at some time drove out the Celts from Dumfriesshire, and that the latter made a stand in Galloway. But in Dumfriesshire we have British or old Celtic, Anglo-Saxon, Danish, and Norwegian names all commingled. In Galloway, Anglo-Saxon names are applied to modern localities, such as churches, villages, and farms recently formed; and Norwegian and Danish names occur on the coast, having been deposited there by the Vikings when they possessed the Isle of Man and Galloway. In Nithsdale we find Celtic and Teutonic names side by side: Drumlanrig, Auchenbainzie, and Barjarg on one side of the river; Thornhill, Closeburn, and Auldgirth on the other. It would be an interesting pursuit to find out how far west certain names are to be found. *Grain*, for instance, as the name of a stream, or the valley through which one runs, is to be found in the Hen Grain, a tributary of the *Æ*: we do not think it occurs in Nithsdale or Galloway. In like manner, it would be interesting to trace the positions of the Anglo-Saxons and Scandinavians in Galloway, and to find out how far inland they penetrated. That some attention should be paid to this subject of the philosophy of place-names is apparent, because, like the land to which many of them apply, they are being reclaimed and cultivated—broken up and made conformable to modern ideas in regard to the mode of spelling and pronouncing them. In their new form it is impossible to distinguish their derivation or meaning. *Poultrybuie*, for instance, suggests fowls; but if we make it *pulture-buaigh* Celtic scholars may be able to draw the proper meaning from it. The fashion is to spell many of these old names, not as they are written in ancient documents, the learned ecclesiastical scribes of which knew their composition and interpretation, but as they are now pronounced. No one would think that Neowklie was *Knevoek-law*, or Carnbee, *Cairn-buagh*. Now were members in country districts to note down the names of farms, fields, glens, knowes, &c., in their respective localities, a list might be formed from which much interesting information regarding place-names could be obtained. It must not be forgotten that language has become the medium by which the migration of the early races of mankind, from the primal home of humanity—"the Roof of the World" in Central Asia—can be traced; and has been of great service in throwing light on pre-historic times.

Commending this branch of the subject to your careful consideration, I would call your attention to the desirability of preserving a record of local customs. However trivial these may appear, they should not be lost sight of. When a vessel is for sale the owner hoists a broom at her masthead. When a country lad comes into Dumfries market, offering his services on hire, he wears a straw in his bonnet. When my wife crossed the threshold of her own dwelling for the first time a friend broke a farl of oat cake over her head for good luck. There was an old woman in Mochrum, who was reputed to be a witch, and boys, now men, in passing her kept the thumb of one hand close clenched in the loof with the fingers hiding it, to protect them from the influence of her evil e'e. To marry in May is deemed foolish. Enquiry into such peculiar customs as I have alluded to, and into belief in the efficacy of "Rowan-tree and red-thread" to "put the witches to their speed;" of four-leaved clover to qualify the eyes to see fairies and wraiths; and of a horse-shoe on the stable-door, &c., belong to the study of Folk-lore. These matters, however, are intimately associated with the history of man. Many of our popular customs and beliefs; children's games handed from one generation of youngsters to another; nursery tales listened to eagerly in youth, and repeated in the decline of life to grand-children, with which we are familiar, are also to be met with in various forms among people widely separated by time and space. The existence of these things, however, point to a common origin. Where local customs are found to exist notice of them should be taken, and preserved by our Society. In the upper part of Eskdale, at the confluence of the White and Black Esk, was held an annual fair, where multitudes of each sex repaired. The unmarried looked out for mates, made their engagement by joining hands, or by *handfisting*, and went off in pairs, cohabited till the next annual return of the fair, appeared there again, and then were at liberty to declare their approbation or dislike of each other. If each party continued constant, the handfisting was renewed for life; but if either party dissented, the engagement was void, and both were at full liberty to make a new choice; but with this proviso, that the inconstant was to take charge of the offspring of the year of probation. The record of this curious local custom has been preserved for us by a passing traveller, and it acquires a peculiar interest when we learn that matrimonial alliances were made in a similar fashion at several places in the northern part of Europe.

Another means by which light is to be thrown on pre-historic times is by studying the remains of man's handiwork, which are to be found *upon* and *in* the ground. No one can travel far in Galloway, especially in the moorland parts of it, without coming upon standing stones, cairns, camps, or kilns. While the purpose or meaning of single and circles of standing stones, like those at Holywood in the immediate neighbourhood of Dumfries, and at less known places in both Dumfries and Galloway, is still involved in obscurity, they are nevertheless objects of much interest. Many circles have been destroyed within the present century, and others doubtless will disappear. Speaking to a farmer about a large stone standing in a field, he remarked—"Aye, there was a ring o' them at ae time, but that's the only ane left. The rest were ta'en to big dykes and mak' yett posts." Such is the succinct history of too many Druidical circles. And so with cairns: we know places in Galloway where the stones have been carried away to build dykes, and the sepulchral kists—the last resting places of mighty dead—are uncovered and desolate. Cairns are still being used as quarries. Only their sites remain in Dumfries; so in Galloway, unless some respect is paid to "the auld grey cairns," they will no more be found, and only scarcely visible grassy spots among the heather will mark the tombs of heroes. Camps, forts, and clusters of stones, supposed to be kiln-floors, but which we think have been the floors of bee-hived shaped houses, will also be swept away before the march of agriculture. Of these remains the study is very interesting, and is all the more delightful that it has to be followed in the wildest and most remote parts of the district. A large volume might be written on the cairns, camps, &c., of Dumfries and Galloway. On the beautiful hills of Nithsdale and Annandale we have little round forts on hill tops and commanding eminences. These are within sight of each other from one end of the district to the other, so that if an enemy approached any point the rising pillar of cloud by day, or the ruddy flame of burning whins by night, would spread an alarm far and wide. At Burnswark square Roman and round British and Norse forts are to be found side by side. At Holmains Fort the defending ditch has been cut out of the solid rock: who did it, and how did they do it? What kind of implements did they use? At the mote of Urr we find Roman, Celtic, and Saxon remains combined. Was it the *Caerbantorigum* mentioned by Ptolemy? is a question calling for settlement. While the Society might

endeavour to prevent the demolition of these interesting relics of our forefathers, it should at any rate preserve as complete a record as possible of their situation, dimensions, and characteristics. A map with their positions accurately and carefully marked and numbered, and a book in which, under the number of each, all that could be ascertained regarding them should be set down, would be of great permanent value. The compilation of such a work would reflect credit on the Society.

What may be done in collecting tools and implements has been fully demonstrated by the Rev. G. Wilson, Glenluce. That gentleman, by careful search among the Sandhills near the mouth of the river Luce, has made a most instructive collection of flint tools and implements, including saws, chisels, knives, arrow-heads, scrapers, &c. The greater number of them is now in the Antiquarian Museum, Edinburgh. As to the significance that attaches to these articles let me remark that flint implements have been found at such a depth in the crust of the earth—in the “boulder clay”—as to lead geologists to conclude that man has existed in the world for 200,000 years. Indeed remains have been found of such a character, and in such circumstances, as to give rise to the opinion that man is of even greater antiquity, and that there were two other kinds of men in the world before the present species came on the scene. Every now and then we read of the finding of flint and stone implements, especially in Galloway. What becomes of them? A few we have rescued from the coal house. Some find their way into local museums, but in many cases they might as well be in the pawnshop. Articles of the kind we refer to lose much of their value unless the precise history of their discovery is known. An arrow-head found in an ocean-fronting cave on the coast of Galloway several feet below accumulated *debris* and soil, and beside the bones of long extinct animals and human teeth, is much more interesting than one picked up in the open fields on the farm of Glengyre, Wigtownshire. Our Society therefore should not only foster the collection and preservation of tools and implements, but should studiously ascertain and record the history of those found in the district. Upon the promoters of public and possessors of private museums they should impress the fact that a mere collection of pre-historic tools and implements without any history of the circumstances under which the articles have been found is of comparatively little scientific or educational value.

OBSERVATIONS ON THE EFFECTS OF THE WEATHER
OF THE PAST TWELVE MONTHS UPON ANIMAL
LIFE. By ROBERT SERVICE.

Read November 7th, 1879.

Mr Buchan, Secretary of the Scottish Meteorological Society, in a paper read before his Society on March 7th, 1879, stated that "The parts of the British Islands where the cold last December was severest was in Dumfriesshire, Cumberland, and part of Kirkcudbrightshire, where the mean temperature was 28° , which was 13° below the average: they had had no previous approach to that, so far as they had had observations made with thermometers in Scotland for 115 years. In the month of January they had a state of things somewhat similar, the month being the coldest January of which they had any record in Scotland. In February the cold still continued in a modified form, the mean being 40° — 5° below the average. Taking Dumfriesshire, and comparing these three months, the mean was 9° below the average of the last 115 years."

After a period of such extreme low temperature, it became very interesting to trace its effects upon animal life. The Fauna of our district—that part of the country where, according to the statement I have quoted, the cold was the most intense—has indeed been greatly disarranged. In some respects the pleasure of becoming acquainted with and seeing in a state of nature, or in greater numbers than before, certain species which were previously scarce or altogether absent, was very desirable; but, on the other hand, it was sad to see the ravages made in the ranks of so many of our resident birds and animals. During the past twelve months I have endeavoured by my own observations, and by means of correspondence with other observers residing in different parts of Dumfriesshire and the Stewartry, to gain as much information as possible as to the effects of the long-continued cold weather, and which even yet continues to exert its influence. These effects have been such that it will be many years to come ere they will be completely obliterated from the eye of the observant naturalist.

I have arranged my notes under the various classes of quadrupeds, birds, and insects—the other departments of animal life I

leave to more competent observers. I will be glad if the following details, given as concisely as possible, are of sufficient interest to sustain your attention for a short time:—

QUADRUPEDS.

About the quadrupeds not much is to be said. Squirrels were all but exterminated, and since last December I have seen only two. Hares and Rabbits suffered greatly, and fully a half of the latter perished on some estates. On Mabie their skeletons could have been picked up actually in hundreds. The Alpine or White Hare was frequently seen in the upland districts during the storm. The few Roe Deer of our district received a considerable accession to their number, and they committed much damage in the young plantations. I saw one in January on the Larchhill which had the hind quarters wholly white. All the Stoats I saw had without exception "assumed the ermine," which is not always the case in this locality. Otters had to emigrate to tidal waters, where their tracks were often seen on the shores of the Solway and along the side of the estuaries of the various rivers. They are but seldom seen there in ordinary winters. Owing to the cold spring, the hibernation of Bats was unusually prolonged, and their general absence throughout the summer was the subject of remark.

BIRDS.

Amongst the raptorial birds affected by the severe weather the Merlin may be mentioned, which became quite common. A fine Hen Harrier was seen on Auchencloy Moor by Mr Bruce of Slogarie. It might be supposed that the birds of prey would be exempt from the prevailing distress amongst the feathered tribes through want of food; but, so far as my experience goes, this was not the case in our district, for all the Hawks and Owls that I examined during the winter were in a greatly emaciated condition. I found the skeleton of a Kestrel on Marthorn; but whether the bird had died of hunger or been shot I am unable to say, although I could find no traces of shot marks on any of the bones; and if it had been shot, its head would have been taken for the "Gamekeeper's Museum."

The Common Dipper was a decidedly "uncommon" bird ere the winter had run its course. More than two-thirds of them,

I believe, either perished or migrated, and I have seen very few indeed since winter.

Missel Thrushes, for as long as I can remember, have been gradually increasing in number until this last fatal winter set in. They then disappeared, but I am unable to assign their disappearance either to death from starvation or to migration, as I found only one of their skeletons. In the past summer their absence has been very noticeable. In former years a nest or two might have been easily got in almost every plantation, but this year the only nest I met with was one near Lochanhead Station.

Fieldfares and Redwings suffered almost total extermination. Liable as these birds are in severe weather to death by starvation, yet I think their destruction must have been quite unprecedented. Instead of the usual large flocks which annually leave us in spring, a small flock of thirty Fieldfares was all I saw during the spring months. These were flying eastwards one morning in March. I will be surprised if either of these species puts in an appearance here this season. Their arrival is now six weeks overdue, and as yet I have not seen or heard of a single bird. The flocks arriving in the autumn of 1878 were unusually early, and also unusually large. Many of these flocks left after a stay of a few weeks, but those remaining were over the average in numbers. The first dead Redwings were found about the 8th December, and in a day or two afterwards the destruction of these large flocks may be said to have been completed. As those intensely cold nights set in the poor things crept underneath clumps of whins and bushes, into holes, or anywhere affording cover, in a vain endeavour to procure shelter sufficient to preserve them from the cold; and when the snow melted, their bleached skeletons were found—in many instances huddled together in little parties of twos and threes. I got as many as four lying together in one rabbit hole. Amongst the large boulders near the south end of Lochaber a considerable flock had perished. On an afternoon in April I spent about an hour in seeking them out from the various crevices into which they had crept, and found upwards of twenty skeletons, both Redwings and Fieldfares. Without exception the skulls and larger bones were either entirely eaten off or partly nibbled away. I suppose this to have been done by some species of mouse. On the 8th December I saw a flock of about two dozen Redwings and Fieldfares sitting on a hedge near Moss-side of Mabie. Six weeks

afterwards, on searching the rubbish at the bottom of the same hedge, I found the remains of nine birds, and at a distance of a few yards I got six more. Apparently they had never been able to stir from the spot; and I believe if I had had time to look for them, I could have found the remainder of the flock. I have notes of other similar incidents, but let these suffice to show the immense destruction of Redwings and Fieldfares. The Thrushes and Blackbirds did not suffer to the same extent as their congeners, the two species last named, but this was in great measure due to the unstinted "outdoor relief" which was extended to them in all our gardens. Their depredations amongst the fruit crops were forgotten, and no thought remained save that of pity for their present sufferings. Even with this help, they in most places gradually disappeared until only a few of the hardiest remained. Their skeletons were to be found in holes of trees and various other similar places. So small was the stock of breeding birds left that during the nesting season I did not see a dozen nests of both species put together, and I need scarcely tell you what a terrible decrease of their numbers this represents. However, in the third week of July I observed a sudden increase of both Blackbirds and Thrushes. The new comers were all young birds, and this immigration was observed in several other parts of our district. Of the Robins, I think numbers died more from cold than hunger. I picked up several dead ones; and the gardener at the Newtown told me that on going to his hothouse stokehole on the morning of the 14th December, after a night in which the thermometer sank to below zero in some places near Dumfries, he found three Robins—two dead and one dying—quite close to the fire. Perhaps they had crept to the heat, and the sudden change had been too much for them. Amongst the summer warblers some curious changes resulted from the ungenial weather of the summer months. The Sedge Warbler, Blackcap, Chiff Chaff, Wood Warbler, and Willow Wren were all, so far as my observation goes, in augmented numbers; while the (usually) Common Whitethroat was very scarce, and the Garden Warbler seemed to be altogether absent. In the autumn of 1878 the Golden Crested Wren, Great Tits, Blue Tits, Cole Tits, and Longtailed Tits passed through the district in larger numbers than usual—getting out of the way, as the sequel proved, of the coming severe weather, which unerring instinct, or whatever it may be called, was prompting them to avoid. The first-named left entirely; but a good number of all

the others remained during the winter, and of all of them, except the Cole Tit, I picked up starved birds. I found a Longtailed Tit near Nethertown on the 14th December, sticking with head and shoulders buried in the snow, its tail upright and just visible above the snow; and as neither wings nor feet had made the slightest marks of struggling, I concluded that its death had been sudden, and that it had fallen frozen from the beech tree above.

The Pied and Grey Wagtails were exceptionally numerous in October and November of 1878, and continued so until the water-courses were all frozen, when they took their departure southwards, and no more was seen of them till March, when they again returned. I saw more of their nests this season than usual.

The Tree Pipits were very scarce all summer, and the few that were in the district lingered unusually late. I shot a fine pair in the middle of last month—a later date than I have seen them hitherto. The Meadow Pipits left the district entirely at the beginning of December, but towards the end of that month some flocks again appeared, probably coming from some more northerly region. Skylarks were not conspicuously numerous until the beginning of January. As you are aware, the Larks have become very scarce hereabouts as a resident species, and I was therefore glad to see that this last spring and summer there were rather more of them nesting than for the past few years.

Several Snow Buntings were procured in November, and one was shot by Mr Bruce of Slogarie in January. The Blackheaded Buntings, the Yellow Buntings, Sparrows, Chaffinches, and Greenfinches made up some vast flocks, which during the continuance of the storm made the farmyards their home, finding there abundance of grain and other food.

I have always been accustomed to look out for some large flocks of the Lesser Redpoll about the middle of March, and which would remain for a few weeks. I saw only one of these flocks, and it remained on Mabie and Dalscairth all summer, and is there yet. I found nine of their nests, and was very pleased to have an opportunity of seeing them, as the Lesser Redpoll has not to my knowledge bred in Troqueer since 1873, when there were a few nests near Cargen. It is somewhat remarkable that each of the nests I examined was thickly lined with feathers, and had many feathers woven into the general structure, and probably we may find a reason for this in the desire of the birds to have a comfortable nest during the ungenial weather of May and June.

I saw no Starlings after the 30th November until the beginning of March. I believe about the usual numbers returned, but from some unexplainable impulse they have kept flying about in flocks ever since. Only about five per centum occupied their nesting sites. Just now there are great numbers of them in the district associating with Lapwings.

The Rooks and Jackdaws need not be mentioned farther than to state, what was apparent to all observers, that these birds had great difficulty in keeping themselves just above starvation point. It was noticed in some parts of the country that they sought out and devoured those birds that had died of starvation. The little Tree Creeper has evidently been killed out: I have seen only one since last November, and they were comparatively common before. The Wren suffered severely, and I picked up several dead ones. Mr Bruce tells me that at Slogarie the Wrens gathered into parties of seven or eight, and as they flew from one clump of brushwood to another they presented a striking resemblance to coveys of miniature partridges. These were doubtless the parties that had gathered overnight and huddled together in some hole for mutual warmth. Those who notice the various calls of birds would remark the scarcity during the past summer of the familiar calls of the Cuckoo and the Landrail and the "jarr" of the Fern Owl. The two former birds were actually very scarce; but the latter, although its loud, jarring notes were less frequently heard, was about as often seen as formerly.

In the late autumn months we had a remarkable immigration of Kingfishers. On the Nith, Urr, and Dee these birds appeared commonly where one, or at most a pair, were previously to be met with at wide intervals. They disappeared for the most part about the middle of December, when the frost became so excessively severe.

The various members of the Swallow tribe, although later in coming in spring, stayed on an average about a fortnight beyond their usual time for departure in autumn. Wood Pigeons endured the storm longer than others, and it was the second week in January before dead ones were seen. The stronger birds were mere bundles of feathers and bones. Hunger overcame their natural timidity, and they came to feed in the cottage gardens on the remains of cabbage and kail stumps. When thus feeding many of them were easily caught. It is rather strange that such a bird as a Wood Pigeon should have remained to suffer hunger,

when its powerful flight, one would think, could in a few hours have conveyed it to where food was plentiful.

The Golden Plovers arrived in some very large flocks in October, and remained till the end of November. A few of them paid us a lengthened visit in spring before moving to their breeding grounds.

Lapwings disappeared entirely at the end of November, and were not seen again until the beginning of March—a fact quite unprecedented, as they were not known to have left the district altogether in winter before.

Many Herons fell victims to hunger, and a splendid plumaged female came into my possession, which was picked up unable to fly at Burnside of Mabie. I have notes of about a dozen others found in various parts of the district. Curlews left entirely for the shore in November. Even there, where one would have thought food for them could easily be got, they became very emaciated; and those I examined in December and January, which had been procured at the shore, were extremely thin. About the middle of January a good many were picked up on the shores of the Solway Firth either dead or in a dying state.

I know of one or two Woodcocks being picked up dead. Of course feeding grounds for these birds would be scarce enough. A number of pairs bred this season in the district. On Mabie there would be at least four pairs that bred; and I started a brood of young ones there, just able to fly, in the first week in August. I mention this not as a result of the bad weather, but simply because the great majority of gamekeepers and others who ought to know better always assert that the Woodcocks all go to Norway and Sweden to nest.

The Water Rail is a bird which even those who are supposed to have an intimate knowledge of such matters seldom suspect of being a regular inhabitant of this locality. When the frost became so severe these birds began to wander about, and many fell victims to the gun. It was rather astonishing to see how few persons recognised the species. Of all our resident birds I believe the Water Hens suffered most severely. In some cases they took their meals with the poultry in the farmyards. Mostly, however, they were to be seen sitting disconsolately on the ice, or being chased about by boys, who appeared to derive a certain satisfaction in dragging them forth from rat-holes, whither they had crept for safety from their pursuers. Many wandered out into the fields,

where they were found lying dead or helpless in all directions. So scarce have they become that only one nest rewarded my keenest search during the breeding season. In former years it would have been an easy matter to find sixty or seventy nests in Troqueer alone. All the Coots went off at the end of November, but only a pair or two here and there returned in March.

On the Solway Firth indications of an approaching severe winter were early seen in the shape of immense flocks of different kinds of Geese, Ducks, and other wild fowls, and towards the end of the storm the flocks of Geese and Ducks became larger than the oldest fisherman on the Solway remembers to have seen. Just at the beginning of the storm, on the 2d or 3d December, I was going to Southernness in the Kirkbean 'Bus. The evening was intensely frosty, and the thick fog was converted into ice crystals, which seemed to chill one to the very bones. The passengers were talking about the weather, and one old lady remarked to the rest of us that "—— (a well-known gunner resident at Carsethorn) has seen some awfu' big flocks o' geese oot on the banks, and he says we're gaun tae have a terrible winter!"—a prediction you will allow that was fulfilled to the letter. The most plentiful species of Goose was the Barnacle Goose, of which I saw some immense flocks. During the winter these flocks went backwards and forwards between the fields and the Solway banks as the tides ebbed and flowed. Numbers of them were shot—a friend of mine at Cargen getting fifteen to his own hand in one afternoon in February. A correspondent, writing from Port Mary, states that he came upon a large flock sitting in a field near the shore. He adds that they were the tamest "wild" birds he ever saw, as they allowed him to walk right up to them and examine them at his leisure. The Grey Lag and the Bean Goose were numerous on Lochar Moss in the beginning of the storm, but they did not remain long, and did not return until March and April. One of the keepers on the moss told me he observed in March a flock of fifteen Geese remarkable for their pure white colour; but as he had no gun with him at the time, the species was not identified. He was very close to them, and felt quite certain they were none of the species in the habit of visiting Lochar. The various Ducks were in great abundance, driven here from their usual northern haunts by the extreme severity of the storm. Amongst the scarcer species Pintails and Longtailed Ducks were tolerably frequent. During the winter months, and even till comparatively late in

the spring, the Golden Eyes were abundant on the Nith. I had the pleasure of seeing a group of six beautiful adult males on the water a little below Mavisgrove at daylight on the morning of the last day of January. Scoters came much nearer the shore than is their usual habit, and at Southerness I was within shot of a considerable flock of them at the point of the Black Rocks. The Mallard, Teal, Wigeon, and Pochard were very numerous until after the first week of the hard weather, when they mostly migrated shorewards. About the end of December and early in January they could easily have been struck with a stone, as they sat about the shore in a weak, almost helpless state, resulting from privation. A specimen of the Garganey was shot at Kirkmichael House in December; and Mr Hastings received a Smew which was shot at Lochmaben.

Goosanders were exceptionally numerous on the Solway, and some fine specimens were procured. Numbers of the Little Grebe made their appearance on the rivers of the Stewartry, remaining most of the winter. This was also the case in the hard winters of 1874 and 1870. The last birds I shall mention as affected by the severe weather are the Blackheaded Gulls (*Larus ridibundus*). You scarcely need to be reminded of the straits they were apparently reduced to to procure food. I saw them often on the public streets (Buccleuch Street, White Sands, Kirkgate, and Galloway Street), and it was no unusual thing to see a dozen of them fighting together for offal in the ashpits. They disputed with Sparrows and Robins for possession of the crumbs laid out for the benefit of the starving birds in little back gardens, and yet they were in good condition and very fat. About half a dozen which I examined were the best conditioned birds I handled during the winter.

INSECTS.

Coming now to the insect tribes, we have quite a different set of facts to set forth. In the vertebrated animals we see how all were more or less affected to an injurious extent. Amongst the insects all the cold weather we had only seemed to make them livelier, and to set them forth, when milder weather came, on their various destructive missions with a redoubled energy, if that were possible. The deeply-rooted, popular idea is that the frost kills the "grubs," but there can be no greater delusion. During the coldest part of the winter I collected a quantity of both larvæ and

pupæ of moths, a few gall insects, and several species of beetles in the larval stage, for the purpose of observing if the frost had had any injurious effect upon them. In every species experimented with no fewer were reared than after the mildest of winters. I need not go into details, as it was abundantly apparent in the case of the Turnip Fly, the Corn Grub, the Wireworm, the Gooseberry Sawfly, the Carrot Worm, the Onion Fly, and others, which were all at their destructive work this season as usual, that the cold had little or no injurious effect upon them.

NOTES OF THE OCCURRENCE OF SOME SCARCE
BIRDS. By WILLIAM HASTINGS.

Read December 5th, 1879.

The past year (October, 1878, to October, 1879, inclusive) has been one of much suffering amongst the birds, several species, particularly the Fieldfares and Redwings, having been entirely killed out during the long-continued frost that we had during the months from November to March. I have made many enquiries as to whether these two species of birds have made any appearance this autumn, but I cannot hear of any having been seen. How our common resident birds, even including the Rooks, managed to subsist is beyond my comprehension. Next to the Fieldfares and Redwings, the Herons, Water Hens, Coots, and Teals seemed to have been the greatest sufferers, and very many of these were sent me that had died of starvation. Amongst the rarer species sent me for preservation I may mention the Longtailed Duck (*Harelda glacialis, L.*), which is seldom met with in this locality, and I have only had one other specimen of it previously through my hands. It is the only Duck I have ever seen that admits of being skinned over the head without the necessity of making an incision in the nape or throat so as to get the skull cleaned. Another rare species that I had was the Smew (*Mergus albellus, L.*), very handsome in form and colouring. Goosanders were very numerous—more than I ever had in any previous winter. I also received several Pintails (*Dafila acuta, L.*), and many more than usual of Wigeons (*Mareca penelope, L.*), Pochards (*Fuligula ferina, L.*), and male Golden Eyes (*Clangula glaucion, L.*) Most of these species did not seem to have suffered much on account of the frost, as they were generally in good condition. I had also a few specimens of the Tufted Duck (*Fuligula cristata, Leach*), which is by no means common in our two counties. In the beginning of August a specimen of the Shoveller Duck (*Spatula clypeata, L.*), shot in Kirkmahoe, was sent me. This is a most unusual time for the Shoveller to be met with here; and as it was a young bird (female), I believe it must have been bred in the locality. I had also a specimen of the Great Crested Grebe (*Podiceps cristatus*) from Wigtownshire, in winter plumage: I

have rarely seen it. A specimen of the Slavonian Grebe (*P. cornutus*, Gm.) was sent from Lochmaben in December. I had numerous Little Grebes (*P. minor*, Gm.)—some of them were sent alive, but in a dying condition. Several Manx Shearwaters (*Puffinus anglorum*, Temm.) were sent me from the Solway Firth: this species seems to be more frequently met with these last few years.

In October I had an immature Richardson's Skua (*Stercorarius crepidatus*, Gm.), which was procured in Hensol meadows. Some specimens of the Chough were sent from the neighbourhood of Stranraer. This bird used to be not infrequently met with on the Colvend shore, but it is now extinct there. I had two fine female Peregrines—birds of the year from Auchencairn. They also are becoming scarcer on our coast. Two specimens of the Grey Phalarope (*Phalaropus fulicarius*, L.) were received from the Glenkens. I had a large number of Snow Buntings; they seemed to be plentiful in several localities. One specimen of the Greater Spotted Woodpecker (*Picus major*, L.) and one of the Lesser Spotted Woodpecker (*P. minor*, L.) passed through my hands during the winter. In March a Wryneck from near Kirkcudbright was sent to me for preservation. A Hawfinch, the only one I ever possessed, was sent from Wigtownshire; a few of the Bartailed Godwit (*Limosa lapponica*, L.) from the Solway Firth. Water Rail (*Rallus aquaticus*, L.) and Spotted Crake (*Porzana maruetta*, Leach) have been sent during the season. None of these are of common occurrence here. I had also a young Cuckoo, nearly white, from Slogarie—a great curiosity so far as colour was concerned. An unusual number of Kingfishers (*Alcedo ispida*, L.) have been sent in during the winter. The Long-eared Owl (*Asio otus*, L.) seems to have been unusually plentiful, and many specimens of the Short-eared Owl (*Asio accipitrinus*, Pallas) have also been procured. The last-named species has almost invariably in its stomach remains of the Field Vole and Wood Mouse. A few Common Buzzards (*Buteo vulgaris*, Leach) were sent in, but none of the Rough-legged species, which I have not seen since 1874.

THE CARICES OF THE STEWARTRY.

By JAMES M'ANDREW.

Read February 6th, 1880.

Carices or Sedges belong to the class of Monocotyledons, division *Glumaceæ*, and order *Cyperaceæ*, and tribe *Caricineæ*.

As sedges greatly resemble grasses, a little practice and observation is required to distinguish them. Sedges differ from grasses in the following particulars:—In sedges the leaves are more commonly glaucous; the stem is angular instead of round, solid or full of pith, and not hollow, and not jointed where a leaf arises, as in grasses; and where sedges have sheaths to their leaves, these sheaths are never split. These prominent distinctions between sedges and grasses will enable an amateur to know a sedge from a grass almost without examining the inflorescence. Grasses afford nutriment to cattle, because they contain starch and sugar; sedges are very deficient in these substances; and though *Carex Ampullacea* and *Carex Vesicaria* when cut young and tender are used as fodder in this part of Scotland, under the name of “star-grass,” from the prickly leaves, yet they cannot give much nourishment. Growing almost everywhere, sedges are looked upon as worse than useless, and take up ground which, if drained and cultivated, would produce excellent crops. Some foreign Carices are useful, either for their medicinal or esculent roots. The earliest kind of writing paper was made from the Papyrus, a *Carex* growing on the banks of the Nile in Egypt. In our own country some are used as rushes for chair bottoms; and along the sandy shores of our coasts and the embankments of canals the roots of such species as *Carex Arenaria* bind the sands and prevent their shifting. Though not a very useful class of plants, they are extensive, and botanically very interesting. Owing, however, to the minuteness of their inflorescence and the great similarity existing between some of the species, they are very difficult of determination. A good lens is absolutely necessary in their examination. In their determination every part of the plant must be taken into account and examined—the roots, stems, leaves, sheaths or none, flowers, barren and fertile spikes, bracts, glumes, perigynium or sac containing the seed or fruit, the num-

ber of stigmas, and even the beak of the perigynium and the seed. For the proper examination of some of these parts the plant must be got in flower; but it must also be had in fruit, when the very form of the matured plant is a material aid to the identification. There is often a considerable difference in appearance between a *Carex* in flower and the same plant in fruit, as, for instance, *Carex Pulicaris*. From the foregoing remarks you will see that it is not surprising that different botanists have adopted different modes of classification of the Carices. These can be seen in the various manuals of British Botany. The barren and fertile flowers are, with one exception, *Carex dioica*, Monœcious—that is, on the same plant—the spikelets either bearing all the flowers barren or all fertile, or partly of both, with the barren spikelet the highest. Carices, though possessing no gay or attractive inflorescence, have yet a wavy and graceful elegance of their own, not inferior to the gracefulness of Gramineæ; and when growing among the latter, as they very often do, they afford a very pleasing mixture of both form and colour. We find Carices in all sorts of waste ground, especially where it is wet or marshy. They are found in wet or dry situations—on rocks, on hills, on plains, by river sides, in marshes, meadows, woods, lakes, and on the sandy sea-shore. The Stewartry, from its diversified surface, contains good examples of all these kinds of ground, and consequently the county contains a very large proportion of the British Carices. Though my gatherings are confined to the Glenkens, the parish of Colvend, part of the parish of Rerrick, and along the shore from Creetown to Ravenshall, yet these districts are sufficient to enable one to know the Carices of the county, for they are excellent representatives of the different characters of ground in which Carices are found growing. In my botanical rambles in the places I have mentioned I have gathered thirty-four species of the British Carices; but from the nature of the ground and the distribution of the British Carices as regards latitude, the following eight species should be found either in Dumfriesshire or in the Stewartry:—*C. vulpina*, *Benninghauseniana*,* *Atrata*, *Rigida*, *Stricta*, *Capillaris*, *Paludosa*, and *Riparia*. I shall esteem it a favour if any Member of our Society will acquaint me with the finding of any

* After this paper was read the Rev. Thomas Bell, Keig, Aberdeenshire, and formerly of Tongland Parish School, wrote me saying that he had gathered *C. Benninghauseniana* in the parish of Borgue, and also, he thinks, in Twynholm.

of the above-mentioned eight species. The names given to the species of Carices, as seen from the etymology, are appropriate and descriptive as far as they go.

I shall now give my list, with specimens, stating anything striking or peculiar about each. Of course full botanical descriptions I need not give, for these are found in any manual of British Botany. The order of the names is from *Hooker's Flora*.

1. *Carex Pauciflora*.—Few-flowered Carex.—Only 4-6 flowers; deflected in fruit; pale yellow, almost white; in damp places among the hills; not common.

2. *C. Pubicaris*.—Flea Carex, from the resemblance of the deflected ripe fruit to insects clustering round the stem. The upper portion with male flowers is not deflected. Common in boggy places.

3. *C. Dioica*.—Peculiar in being dioecious—that is, male and female flowers on different plants. It has a very neat, compact spikelet; fruit not deflected. It grows in the same boggy places as *C. pauciflora*, and I have found it to be as rare.

4. *C. Intermedia* or *Disticha*.—Soft brown sedge. I have only found it in a damp meadow at the head of Loch Ken, though I have no doubt it is common. The spike is composed of spikelets. This Carex is peculiar in appearance. In all stages of its growth the middle portion of the spike differs in appearance from the two extremities, owing to its being separated by the remains of the barren spikelets; hence the term *Intermedia*.

5. *C. Arenaria*.—Sand Carex; very like *C. intermedia*, but only about half the size; very useful in binding the sand; has subterranean stems, which send up other plants from the joints. Common in sandy places along the Solway.

6. *C. Paniculata*.—A large Carex, with spike thrice compound; fruit spreading when ripe, giving the spike a very rough and prickly feeling. One peculiarity of this Carex is that it grows in large tussocks. In the Glenkens I have found it only at Bogue, Dalry; I have also got it in Rerrick.

7. *C. Teretinscula*.—Like a small *Paniculata*, but with no tussocks; has a compound spike, but neater, smaller, and more compact-looking than *Paniculata*. Found at south end of Carlingwark Loch, in meadows, and in Rerrick.

8. *C. Muricata*.—Great Prickly Carex. I have only found it along the shore. Fruit spreading when ripe, giving it a very prickly appearance and feeling.

9. *C. Stellulata*.—Like Prickly Carex ; spikelets contain 7-8 seeds, like a little star. Very common in boggy meadows.

10. *C. Remota*.—One of those Carices which, once seen, cannot be easily mistaken for another ; not very common ; in wet and shady copses ; more slender in the shade. The lower bract often exceeds the stem. Spikelets small, neat, and remote ; leaves long, narrow, and channelled. *C. Axillaris*, an English species, is very like this one ; and *C. Boeninghausenia* is very likely a hybrid between the two species.

11. *C. Ovalis*.—A very common Carex, with egg-shaped spikelets—one terminal, and the others inserted a little below each other ; brownish-green shining spikelets ; long, grassy leaves ; and a triangular, hollow stem.

12. *C. Canesceus* or *Curta*.—A very neat sedge, and pretty common in wet and boggy places. It has a greyish-white appearance, caused by the whitish colour of the glumes ; neat, egg-shaped spikelets. It has somewhat the appearance of *Ovalis*, but paler and neater.

13. *C. Acuta*.—In outward appearance this Carex is like a large form of *C. Vulgaris*. *Acuta* I have only found along the river Ken. It has bracts with long, pale auricles ; spikes long and a little drooping ; leaves inserted in three rows ; stems triangular and rough ; barren spikelet at the top.

14. *C. Aquatilis*.—I have only found this Carex in one place, near Ken Bridge. It was growing along with *C. Pendula*, which it somewhat resembles, but is smaller and later in flowering. This year, from the extra quantity of water in the pool, I did not get a single specimen. It is a rare Carex in the south of Scotland, but abundant—at least, the variety *Watsoni*—on the river Tweed. Discovered in Britain by Mr Drummond, Dr Greville, and Dr Hooker in the Clova Mountains.

15. *C. Vulgaris*.—This in its various forms is a very common Carex ; dark, obtuse glumes, sometimes with green mid-rib ; and the lower bract has a dark auricle at the base. The fruit is so much compressed that it is nearly flat.

16. *C. Limosa*—Mud Sedge.—This is only found in a ditch at Barscraigh Loch, in Colvend. It is very rare in this district. Once seen, with its large glumes, it can be easily recognised again. Egg-shaped spikes are gracefully pendulous. Sometimes called the green and gold Carex, from its glumes. Variety *Irrigua* is found in Dumfries, but where I cannot say.

17. *Glauca* or *Recurva*.—Common, with glaucous leaves, perigynium rough, caused by depressed points. Spikes pendulous when ripe.

18. *C. Pallescens*.—Very neat—as neat as *Canescens*; pale green hue; fertile spikes short and sessile, with inflated perigynia; leaves slightly hairy. Common in drier situations than most *Carexes*.

19. *C. Panicea*.—Very common in damp places. Like *C. Glauca*, but spike not so compact. Leaves so glaucous that it is called the pink-leaved sedge. Only to be confounded with *Glauca*. Perigynium dotted.

20. *C. Pendula*.—Great pendulous sedge, 3 to 5 feet high. Fertile spikes distant, very long, cylindrical, and drooping. Pedicels concealed in the long, leafy bracts. One barren and sometimes six fertile spikes. Not very common. On banks of river Ken, and some very large specimens on the Dropping Craig, Rerrick.

21. *C. Praecox*.—This, with the next three—*Pilulifera*, *Hirta*, and *Filiformis*—has the perigynium downy. *Praecox* and *Pilulifera* very like each other; distinguished by *Pilulifera* having no bract sheath. Leaves in tufts. Spikelets crowded, sessile, and short, the female being oblong; while *Pilulifera* has them almost globular. Fruit crowned by a minute ring; yellow anthers. Very common and very early; in dry places.

22. *C. Pilulifera*.—Very common, like *Praecox*, but no bract sheath; fruit sub-globose, while that of *Praecox* is trigonous; root tufted, while that of *Praecox* is creeping.

23. *C. Hirta*.—Whole plant downy; several male and several female spikelets. Easily known by its broad, downy leaves and spikes, and cannot be mistaken for any other *Carex*. In abundance between Creetown and Ravenshall.

24. *C. Filiformis*.—Rare and local. Loch of the Lowes, Balmacellan, and ditches among the hills. Very long, channelled, narrow, involute leaves; very long bract.

25. *C. Extensa*.—Only found on the shore, as in Colvend and Rerwick; like a large form of *C. Flava*. Leaves long, narrow, and bracts very long, and so called the long-bracteated *Carex*; stem more or less curved; fertile spikes short and sessile. In *Flava* they are stalked, though the stalk is concealed by the sheaths of the bracts; the lowest bract in *Extensa* is almost horizontal—perigynium is dotted.

26. *C. Flava*.—Yellow *Carex*, very common in wet places; like *Extensa*, but smaller. Bracts have short sheaths hiding the stalks

of the spikes ; beak of perigynium is recurved ; fertile spikes distant. Var. *Æderi* is smaller, and has the spikes close together.

27. *C. Distans*.—This, with *Fulva*, *Binervis*, and *Lævigata*, form a group of which it is difficult to catch the specific characters. *Distans* (proper) is found near the sea in brackish marshes ; distant interval between the two lower fertile spikes ; Colvend.

28. *C. Fulva*.—In damp places in the hills ; known by its leafy stem and by the long sheath which accompanies the lowest bract. Some consider it a form of *Distans*.

29. *C. Binervis*.—So called from two green nerves or ribs on the outside of the perigynium. Very like *Distans*, but larger and stouter, often 4 feet high. Very common on dry moors and similar places. The slender stems droop on all sides ; male spike is neat and spindle-shaped ; bracts leafy, except the upper one, which is very minute, forming scarious or callous tips to the slightly slit sheath.

30. *C. Lævigata*.—Like a large form of *Binervis*, but its male spike is trigonous, while that of *Binervis* is round ; stem smooth, while that of *Binervis* is rough at the top. I have only found it on Airds, a farm on the river Dee opposite Hensol.

31. *C. Punctata*.—This is the rarest *Carex* I have gathered in the Stewartry. The Rev. Mr Fraser, Colvend, found it in his parish some time ago, and specimens sent by him from Colvend are still, I understand, in the Herbarium of the British Museum. Two years ago he showed Dr Gilchrist and me the plant. I do not think that any other person has found it in Scotland. Grows only near the sea.

32. *C. Sylvatica*.—An elegant *Carex* ; flat, broad, soft leaves ; long-pedicelled, lax-flowered spikes ; very slender and drooping. In woods in damp places—Holm Glen, &c., and at Kirkdale, and at Rerrick. Linnæus tells us that the Laplanders dress it, and use it for keeping their feet dry.

33. *C. Vesicaria*.—This and *C. Ampullacea* are very like each other, both having inflated perigynia—called the bladder *Carex*—stem rough, while *Ampullacea* has it smooth ; light green leaves, and *Ampullacea* has long, channelled, glaucous leaves. Often these two grow together, and are very common in bogs and marshes, by the sides of lakes, rivers, &c.

34. *C. Ampullacea*.—Bottle *Carex*. The principal points of difference between this and *Vesicaria* have been noted above.

NOTES ON A COLLECTION OF TRICHOPTERA FROM
THE STEWARTRY. By F. G. BINNIE, Glasgow, Cor-
responding Member.

Read March 6th, 1880.

I am very glad to have had the opportunity of examining a collection from a district hitherto, I believe, unworked as regards this group, and I hope Mr Service will continue his work in this neglected order. The majority of the species represented are characteristic of running water, although stagnant water species are not absent, as those of the genera *Phryganea*, *Limnophilus*, *Anabolia*, and in part the genus *Leptocerus*. I miss, however, among the stagnant water forms such common species as *Limnophilus marmoratus*, *flavicornis*, and *vitatus*, associated almost invariably in this district with *Limnophilus lunatus*. Doubtless they will be found on further search. All the British families are represented, except the *Hydroptilidae*, which is composed of small species difficult to resolve. It would be premature, with the existing paucity and inadequacy of material, to institute any comparison between the present collection and the species of the Glasgow districts. I may note, however, that with the exception of *Limnophilus auricula*, *Leptocerus annulicornus*, and *Chimarra marginata*, all are represented in the district. The various species of Caddis-flies do not yet possess popular and familiar English names like the Lepidoptera. Perhaps this is no loss if we consider how unmeaning many of these English names are. Their life histories, where worked out, offer little that is striking, and only interest the enthusiastic Trichopterist or the student of Evolution. Anglers use their larvæ, when extracted from their cases, as ground-bait, and also make use of the wings of some species, as *Halesus radiatus*, in the manufacture of the artificial fly. Mr J. J. King, during a visit to your district in 1879, captured several species not represented in the present collection. These I have marked with an asterisk. I have followed the nomenclature of Mr M'Lachlan in his "Monographic Revision of the Trichoptera of the European Fauna;" but, for the convenience of any one who may not possess the work, I have placed within parenthesis the

name used in the same gentleman's "Catalogue of British Neuroptera" wherever this differs from the one here adopted. The arrangement followed is that of the catalogue.

FAM. PHRYGANEIDÆ.

Phryganea varia, Fab.—A common species.

FAM. LIMNOPHILIDÆ.

* *Colpotaulius incisus*, Curt.—Maxwelltown Loch.

* *Glyptotaelius pellucidus*, Oliv.—Maxwelltown Loch.

Limnophilus rhombicus, L.—Cargen Water (Conhuith).

„ *lunatus*, Curt.—Terreglestown Meadows.

* „ *xanthodes*, M'L. (*borealis*).—Maxwelltown Loch. In this individual (a male) the pale apical space of the anterior wings is obsolete. In England it is local, but not uncommon in the fens of the east.

* „ *griseus*, L.—Maxwelltown Loch. An extremely variable species: it is even possible to mistake small forms for the next species.

„ *auricula*, Curt.—This species has not yet been found in the Glasgow district; but Mr King has taken it further north—at Aviemore.

„ *luridus*, Curt.—Slogarie.

„ *sparsus*, Curt.—An exceedingly variable species.

Anabolia nervosa, Curt.—Cargen Water, Crooks Pow.

Stenophylax stellatus, Curt.—Glen Mills.

Halesus radiatus, Curt. (*digitatus* in part).—Mr M'Lachlan, while compiling materials for his "Monographic Revision," found that three species were confused by authors under *digitatus*, Schr.—viz., *radiatus*, Curt.; *tesselatus*, Ramb.; and true *digitatus*. Of these *radiatus* and *digitatus* are British, the former being the more usual form. Both occur in the Glasgow district, and doubtless will also be found, on further investigation, in the Stewartry.

Drusus annulatus, Steph.—This species is, so far, confined to Britain.

FAM. SERICOSTOMATIDÆ.

Serocostoma personatum, K. & S. (*Spenceii*).—Belongs to a difficult genus. M'Lachlan, in his latest work, admits provisionally 16 species. This is the only British species.

Silo pallipes, Fab.—A common species.

Lepidostoma hirtum, Fab. (*Mormonia hirta*).—River Nith.

FAM. LEPTOCERIDÆ.

Odontocerum albicorne, Scop.—Lochaber.

Leptocerus annulicornis, Steph.—A local species: it has not been found in the Glasgow district; but I have taken it by the Forth, near Stirling.

„ *dissimilis*, Steph.—Near Loch Kindar.

„ *bilineatus* (*bifasciatus*).—This and the next species are very similar, but are readily distinguished by the present species having the fore wings covered with a dense black pubescence, and more especially by the absence of white vertex.

„ *Albifrons*, L.—Has the vertex clothed with snow-white hairs—hence its name—and the pubescence of the fore wings is dark brown.

Mystacides azurea, L. (*nigra*).—The nomenclature in this genus has been entirely changed by M'Lachlan in his "Revision." The other two British species both occur in our district.

Æcetis testacea, Curt. (*Setodes testacea*).—Conhuith. The only other recorded Scottish locality is in the Glasgow district.

FAM. HYDROPSYCHIDÆ.

Hydropsyche instabilis, Curt.—Cargen Water.

Polycentropus flavomaculatus, Pict.—Lochaber.

FAM. RHYACOPHILIDÆ.

Rhyacophila dorsalis, Curt.—An abundant species by every burn and running stream.

Glossosoma boltoni, Curt.—Lochaber. Mr King has also taken this species at Maxwelltown Loch.

Agapetus comatus, Pict.—In one of the specimens sent fork No. 3 of anterior wing is equal to fork No. 4, and in another individual it extends much farther inwardly. Normally it should be shorter, and this aberration is a character of another species, *fuscipes*, from which, however, it is easily separated by the short and stout process of the sixth ventral segment of the abdomen, as well as by the other anal characters. In *fuscipes* this process is long and slender, extending as far or beyond the apex of the ninth segment. These specimens, however, preserve the small fork at termination of radius of posterior wings. It is not forked, or only aberrantly so, in *fuscipes*.

Chimarra marginata, L.—Slogarie. A beautiful and strikingly marked species. According to M'Jachlan, "it especially delights in torrents in which are mossy boulders, upon which it rests."

OBSERVATIONS ON THE SALMON DISEASE.

By J. RUTHERFORD.

Read April 23d, 1880.

As my communication to this Society last month was oral, I thought it might perhaps be as well to write a paper on the subject, including most of the remarks I then made, as well as some little work I have done since.

1st. I will describe the appearance of the disease as I have seen it, as clearly and plainly as I possibly can, which I have had confirmed by the examination of a good number of fish. The conclusions that I have arrived at from those facts and appearances may not be correct, as I do not consider my physiological knowledge sufficient to warrant my assuming that of an authority on the subject. As to the appearance of the diseased fish when seen in the water I need say little, as it must be so well known to the most of you. When they are first seen to be affected they have one or two small spots generally near or on one of the fins, often the dorsal or tail fins. Those spots gradually extend, until in a number of cases the fish is nearly covered. In the course of time, when the disease begins to affect the constitution of the fish, they begin to look languid, and gradually draw into the smooth and shallow water at the sides of the river—I believe from a feeling of weakness to resist the current of the stream. The white spots when seen in the river look like mould, such as is generally seen growing on decaying animal or vegetable matter. I have seen it when it looked to be about an inch or so in length. When the fish is taken out of the water that mouldiness assumes a sort of matted, slimy appearance, and can easily be scraped from the scales with a sharp knife or razor, and in most cases leaves no trace by which the eye could detect that it had ever been there. A little of the mouldy-looking substance placed under the microscope reveals at once the fact that it is a fungus—viz., *Saprolegnia ferax*, the filaments of which take all sorts of forms. The most of other plants can be at once known by the form which they almost universally take, but not so with *S. ferax*. This fungus takes all imaginable forms for its filaments. I have made (partly

by Camera Lucida) rough drawings of some of the forms that I have met with, although they by no means complete the variety. I think the tubes or cells of the filaments are oval, not circular; at least, I am led to think so by the appearance presented. They are generally built up of two, and sometimes of three, large cells. Some of the filaments are filled with a protoplasmic-looking substance. "That," says Mr Worthington Smith, the eminent fungologist, "gradually changes to the granular form," which indeed is the form most commonly met with; and those granules, which are the spores of the fungus, begin to have a motion of their own inside the parent cell, and when the proper time comes they are discharged by the sporangia at the apex of the filament. After these filaments have discharged part of their living freight, those spores then take the form of Zoospores, "having two cilia," moving about in the water like true Animalculæ, ready to attach themselves to any proper substance that may come in their way on which to germinate, and throw out filaments similar to those from which they came; indeed, so prone are they to grow that it has been supposed that filaments having the form represented in the diagram are those in which the spores have actually germinated in the parent cell. Now, when we look at the thousands of filaments on one single spot of disease, and consider that each of those filaments gives off a numberless quantity of spores, we will begin to have some idea that the quantity of Zoospores lodged in and floating down an affected river must be beyond all calculation. One feature I noticed in connection with those Zoospores—that if, when under observation, a stream of liquid was made to flow across the slide, they could attach themselves to the glass, so that they were not carried away by the stream, and by the same means will attach themselves to the stones, &c., in the river, or the dorsal fin of a Salmon. I have not been able to trace the roots of the fungus beyond the skin that covers the scales. In making a cut into the fish through the fungus, the eye at once is attracted by an inflamed, unhealthy-looking stratum of muscle below the skin, of varying thickness. In one fish that I examined it extended right through to the inside. Sections of that muscle when placed under the microscope were seen to be literally one mass of life—that life being a species of Bacteria. If I am asked the question, What are Bacteria? I cannot answer it. Some philosophers call them vegetable forms of life, and some seem to doubt it; but this I can say, that they are small, discoid-looking bodies, which in

this case I find embedded and moving amongst the striated muscle fibre of the fish; and when by pressure or otherwise they are forced into the surrounding fluid, they have a power of motion, moving mostly in a sort of circular direction. In some fish that I have examined I observed that the muscle was almost detached from the strong fibro-muscle layer of the skin, and the muscle fibres of that layer were not adhering together as in their natural state, and could be separated from each other like threads by the needle. Whether the diseased condition of that part of the skin was caused by the state of the muscle immediately below it or by the fungus on its surface I am not in a position to say. By looking at the very rough drawing of a transverse section of Salmon skin made by the Camera Lucida, you will observe a dark layer marked "opaque muscle layer." That is the fibro-muscle layer of the skin that I have been alluding to, and to which is attached the true muscle of the fish; and should the fish live long enough, ulceration of those affected parts must take place. As I did most of this work in the winter, when the frost was so hard, I took advantage of it to freeze parts of fish in the section instrument, and by this means I got some capital sections of fungus, scales, skin, and muscle. I preserved one of those sections, which is a very fine one, showing the forms of the Bacteria still in and around the muscle. After examining a number of fish, and finding the conditions alike in each, I then began to speculate a little as to the nature of the disease I have just described, and the idea at once suggested itself, after what I had seen, that the disease was located in the muscle of the fish; and I also have some idea that when it is really known it will be found to commence in the blood, caused either by the food they eat or by some deleterious solution in the water which passes through the gills, and that the unhealthy, decaying fluid or matter, which will naturally pass off from those Bacteria and exude through the pores of the skin, forms a healthy and proper *nidus* for the germination of the Zoospores of the fungus, which, as I have shewn you, must be in those affected rivers in myriads. Now, let us look for a little at what authorities say on the subject in support of my theory. I have been told by persons having an aquarium that previous to the growth of the fungus on a fish it exhibits signs of indisposition. Then Dr Carpenter says, when speaking of fungi, "there are various diseased conditions of the human skin and mucus membranes, in which there is a combination of fungoid

vegetation and morbid growth of the animal tissues, such as *Tinea favosa*," and various others he names. Then he goes on to say "that it is a disputed point whether the morbid condition or the fungus is the disease," but closes by saying that the first or morbid condition being the disease is rather consistent with general analogy, and especially with what is known of the conditions under which the various kinds of fungoid "blights" develop themselves in or upon living plants. When speaking of potato and vine disease, he says "that the fungus on those plants will not grow on those which are perfectly healthy, but that a disordered condition is necessary as a predisposing cause. Again, if you refer to those excellent papers presented to the Society to-night by Mr Stirling, he gives a long account of some very interesting experiments (p. 247) where he placed fish or parts of fish covered with *S. ferax* in water along with healthy fish, and the healthy fish were not contaminated by the fungoid disease, although the germs of that disease must have been in the water in thousands. There are various other parts in those papers I would have liked to have noticed as proving my theory, but I have lent my copies to a friend and cannot remember the parts. Those experiments I have alluded to clearly prove that, unless there is a predisposing cause, fish will not contract the fungoid part of the disease; they must have a disease or decay in their body on the products of which the fungus germinates and grows. In fact, it is contrary to anything I have either read or know for fungus to grow on either healthy animal or vegetable. As far as I have been able to decide by a number of experiments, I am rather inclined to believe that salt water is not very favourable to the growth of *S. ferax*; but as far as the Bacteria in the muscle are concerned, no washing by any solution will affect them. I have cut sections of muscle containing them, and placed one in a saturated solution of salt and one in clean water, and kept them for several days. Those in the salt solution were as lively at the end of the period as when taken from the fish; in fact, they did not die until they were placed in a preservative fluid containing arsenic. If this disease is cured by the return of fish to the sea, it must be ascribed to the food they get there and the general invigorating influences, and not to the fact of their being washed externally by sea or salt water. As to how diseased fish are to be cured in the rivers I cannot even concoct a theory; but I have no faith in putting salt, acetic acid, or any other chemical in the water, as I believe by the time that

the diseased fish were expected to be cured they and all other fish in the river would be killed. On the 22d of March last I was again favoured by Mr Fenton sending me two diseased Grayling and a cut from a Salmon. The cut from the Salmon had no trace of fungus. Skin and scales were all clean and perfect, but the muscle below the skin for from one-half to three-quarters of an inch had that inflamed-looking appearance, and was swarming with Bacteria, while the muscle of normal colour was quite free from them. Both of the Grayling were females, full of healthy-looking roe: both had fungus on the same part—from the ventral fin round behind the dorsal fin—and both had the same condition of muscle that I have already described. One had heart, liver, and all internal organs healthy, so far as I could judge, with a very small quantity of digested food in the large intestine. The other had an inflamed patch on the side of the stomach. Sections of that part on examination were found full of Bacteria. Its liver also was in the same diseased condition, and it had no trace of food in it, and no doubt would very soon have died. I have seen it stated that the act of spawning so weakened or lowered the condition of the fish that they became a prey to the disease. But that cannot be so, as I have seen at least three female fish full of healthy-looking roe, seemingly ready for being deposited in the spawning bed. I have given something like a description of the disease as I have seen it; and if the theory I have formed regarding it is correct, the next point to be studied is its cause. At present I am of opinion that the cause must be looked for in the water by examining chemically, microscopically, and experimentally, quantities of water taken from the river in the autumn when it is very small, after a long absence of rain.

NOTES ON RARE BEETLES, No. II.
By WILLIAM LENNON.

Read April 23d, 1880.

A year or two since I had the pleasure of preparing a paper for the Society, giving an account of the rare or local species of Coleoptera I had met with in this district. The paper to which I allude was subsequently printed in the last published part of the Society's *Transactions*. I now propose to give, in the following remarks, a continuation of my former paper, giving the names of those species I have met with lately and the localities where they were found. First then comes

Sphodrus leucophthalmus.—Found in several of the shops and houses in Galloway Street, Maxwelltown. I am indebted to Mr Service for specimens of this beetle; I have never found it myself.

Perileptus erolatus.—Not common; the only locality I know for it is under stones on both sides of the Cairn between Hawhill and Irongray Kirk.

Hydroporus novemlineatus.—A very scarce species; I have found it only in the White Loch, Colvend.

H. picipes.—Also very scarce; found in Maxwelltown Loch, and also near Kelton.

H. rufifrons.—Is very rare; found once in the Cairn, near Gribton, and once in Lochar, near Sandyknowe.

H. quinquelineatus.—Also very rare; the only locality I know for it is a deep, stagnant pool on the east side of the Cargen Pow, between the Dalbeattie road and the Castle-Douglas road.

Agabus solieri.—Rare; I found three specimens in the Cairn, near Gribton, and a few near Kelton in flood refuse.

A. nitidus.—A very scarce insect; found in running streams—the Cairn, near Gribton.

A. brunneus.—A rare insect; I have not met with it elsewhere than at Kelton in flood refuse.

Helophorus tuberculatus.—I have taken one specimen of this, and it may be considered almost unique, as, so far as I know, only one other has been got in Britain. I found mine at Kelton in flood refuse. I am indebted to Dr Sharp for naming this insect for me.

Berosus spinosus.—Found only in the salt marsh opposite Caerlaverock Castle. It is not common even there.

Hydreæna pulchella.—The best locality for this little species is under stones on both sides of the Cairn near Hawhill.

Myrmedonia collaris.—A very scarce species; found only at Kelton in flood refuse. Its proper habitat is said to be in Ants' nests, but I have been unsuccessful in finding it in the hundreds I have examined. Those found at Kelton have of course come down the river or some of the smaller streams flowing into it.

Gymnusa brevicollis.—A very rare species, of which I possess only a type, found at Kelton last summer in flood refuse.

Lesteva muscorum.—Very scarce; I have found it only at Dalscairth.

Syncolypta setigera.—Found along the shore opposite Caerlaverock Castle and near Kelton.

Aphodius zenkeri.—In flood refuse near Kelton; not common.

Trachypleus laticollis.—Exceedingly rare; only one specimen, near Kelton, in flood refuse.

Magdalinus carbonarius.—A very scarce species; found near Dalscairth House.

Liopus nebulosus.—Also a rare species, and also found at Dalscairth.

Strangalia quadrifasciata.—Very scarce; I met with a specimen once in a wood near Caerlaverock Castle many years ago. Last August Mr Service captured two on flowers of the Goutweed near Mabie; and Mr M'Ilwraith took another about the same time, which flew into the boat in which he was fishing at Lochaber.

Donacia menyanthidis.—Not common; last summer I took one at Lochaber, and another at the White Loch of Colvend.

Chrysomela marginata.—The only specimen of this I have met with I captured last June at Kelton in flood refuse.

Procrustes coriaceus.—This was taken in the Troqueer Mills and given to Mr Service. It is very probable, however, that it had been introduced in foreign wool, as it has occurred before in Britain in similar circumstances. It is a common species in Central Europe, as I learn from Dr Sharp, who kindly named the specimen.

A P P E N D I C E S .

A P P E N D I X A .

LIST OF MEMBERS OF THE SOCIETY IN THE SESSION OF 1880-81.

ORDINARY MEMBERS.

(Those Members who joined the Society when it was re-organised on November 3d, 1876, are indicated by an asterisk).

Date of Election.	
	*John Adair, Jeweller, High Street, Dumfries.
	*William Adamson, Broom's Road, do.
	*James Aitken, The Hill, Dumfries.
Oct. 6th, 1879	—Charles Allan, Albany Place, Dumfries.
Feb. 1st, 1878	—George Armstrong, Corberry Cottage, Maxwelltown.
March 4th, 1879	—James Arnott, High Street, Dumfries.
Decr. 3rd, 1880	—James Barbour, Architect, do.
Jany. 5th, 1877	—James Beattie, Ironmonger, do.
	*James Bell, Seedsman, do.
Jany. 4th, 1878	—Charles Black, Arbigland, do.
Decr. 1st, 1876	—Major Bowden, Lochfield, do.
April 5th, 1878	—Sir William Broun, Bart. of Colstoun.
March 5th, 1880	—J. Broun, Solicitor, Dumfries.
Oct. 8th, 1880	—J. Brown, Drumsleet School, Troqueer, Dumfries.
April 1st, 1881	—Tom Brown, Auchenhessane, Penpont, Thornhill.
Jany. 5th, 1877	—Dr W. A. F. Browne, Crindau, Dumfries.
Feb. 7th, 1879	—T. R. Bruce, of Slogarie, New-Galloway.
March 5th, 1880	—W. Byth, The Academy, Dumfries.
Jany. 4th, 1878	—John Callander, High Street, Dumfries.
Nov. 5th, 1880	—Rector Chinnock, The Academy, Dumfries.
April 4th, 1879	—Robert Chrystie, Buccleuch Street, Dumfries.
April 4th, 1879	—Samuel Chrystie, do. do.
March 5th, 1880	—John James Clark, Market Hall, do.
Jany. 5th, 1877	—J. Gilchrist-Clark of Speddoch, do.
March 1st, 1878	—W. B. Coupland, Nithsdale Mills, do.
Oct. 8th, 1880	—John Costin, 3 Buccleuch Street, do.
	*Dr Coupland, Brook Street, do.
	*Dr Cranstoun, St. Michael Street, do.
April 23d, 1880	—A. B. Crombie, Architect, do.
April 5th, 1878	—James Culton, Dildawn, Castle-Douglas.
	*Dr J. Cunningham, Buccleuch Street, Dumfries.
Decr. 3d, 1880	—W. Dair, Crichton Royal Institution, do.
	*J. Davidson, of Summerville, Maxwelltown.
	*W. A. Dinwiddie, Greenbrae, Dumfries.
Oct. 6th, 1879	—L. M. Dinwiddie, do. do.
Decr. 1st, 1876	—P. Dudgeon of Cargen, do.
Decr. 3d, 1880	—John Dalziell Fairley, Cape Coast Castle, West Africa.
Oct. 6th, 1879	—J. Fergusson, Queen Street, Dumfries.
Oct. 5th, 1877	—Rev. J. Fraser, Colvend Manse, Dalbeattie.
	*Robert French, Coldstream.
	*W. G. Gibson, Clerkhill Cottage, Dumfries.
Decr. 7th, 1877	—J. Gibson, Bank of Scotland, do.

Date of Election.

- Oct. 6th, 1879—D. A. Gillespie, Kingholmbank Cottage, Dumfries.
 *Dr Gilchrist, Linwood, Dumfries.
- Novr. 1st, 1878—T. Gracie, Kirkmichael House, Dumfries.
- Febry. 1st, 1878—Rev. W. Graham, Maxwelltown Manso.
- Jany. 5th, 1877—J. A. Greig, 15 Royal Crescent, Edinburgh.
 *F. W. Grierson, Chapelmount, Maxwelltown.
 *Dr Grierson, Thornhill.
 *J. D. Grierson, Rhonehouse, Castle-Douglas.
- April 6th, 1877—William Halliday, College Street, Maxwelltown.
- Jany. 4th, 1878—Malcolm M'L. Harper, Castle-Douglas.
 *Douglas Baird Hart, Friars' Vennel, Dumfries.
 *William Hastings, English Street, do.
- Decr. 7th, 1877—J. Hutton, Ramsay Cottage, Maxwelltown.
- Febry. 1st, 1878—J. Hogg, Saughtree, Dumfries.
 *W. S. Hogg, do. do.
- Febry. 6th, 1880—Sheriff Hope, do.
- Novr. 2d, 1877—J. Houston, Greyfriars' Street, Dumfries.
- Decr. 1st, 1876—Thomas Jackson, Nith Place, do.
 *James Jardine, Echo Office, Sunderland.
- March 2d, 1877—George Johnstone, Castlemilk, Lockerbie.
- Jany. 9th, 1880—Rev. J. B. Johnstone, Glebe Terrace, Dumfries.
 *Dr Kerr, Castle Street, do.
- Novr. 1st, 1878—J. W. Kerr, The Academy, do.
- March 2d, 1877—J. Landells, Her ild Office, do.
- Decr. 3d, 1880—A. Lawson, English Street, do.
 *William Lennon, Brook Street, do.
 *James Lennox, Edenbank, Maxwelltown.
 *John Lennox, do. do.
- Oct. 8th, 1880—J. Longmore, Industrial School, Dumfries.
- April 5th, 1878—T. Low, Chemist, do.
- Oct. 8th, 1880—W. Martin, Town Clerk, do.
- Jany. 4th, 1878—J. Matthewson, Dalbeattie.
 *John Maxwell, King Street, Maxwelltown.
- April 5th, 1878—J. H. Maxwell, *Kirkcudbrightshire Advertiser*, Castle-Douglas.
- Oct. 6th, 1879—W. J. Maxwell, Terregles Bank, Dumfries.
- Febry. 6th, 1880—Capt. Maxwell of Terregles, do.
- Febry. 6th, 1880—E. Constable Maxwell, Terregles, do.
- Mar. 23d, 1880—R. W. Miller, Queen Street, do.
- Novr. 5th, 1880—G. Milne, Cintra Villa, do.
 *James Moodie, Schoolmaster, Maxwelltown.
- Oct. 6th, 1879—N. Murdoch of Netherlea, Dumfries.
 *Dr Murray, Castle Street, do.
- Oct. 6th, 1879—James M'Andrew, The Schoolhouse, New-Galloway.
 *Dr MacDonald, Castle Street, Dumfries.
- April 4th, 1881—John M'Kie of Anchorlee, Kirkcudbright.
- Novr. 7th, 1879—P. B. M'Kill, Rae Street, Dumfries.
 *John M'Lean, Jeweller, do.
- March 5th, 1880—John M'Meekan, Linden Grove, Dumfries.
- Oct. 6th, 1879—James M'Veigh, Glencaple, do.
- March 4th, 1879—John Nelson, The Academy, do.
- Novr. 7th, 1879—John Newbigging, Kirkbank, do.
 *J. H. Nicholson, Chemist, Maxwelltown.
- Decr. 7th, 1877—A. Paterson, High Street, Dumfries.
- Oct. 8th, 1880—Gray Philips, Rosefield, Troqueer.
 *J. Reid, Greystone Cottage, Dumfries.
- Jany. 4th, 1878—G. Robb, Rhynie House, do.
 *J. Rutherford of Jardineton, do.
- Febry. 7th, 1879—John Rutherford, Pleasance, Kirkmichael.
- Oct. 8th, 1880—W. Scott of Broomlands, Dumfries.
- Decr. 3d, 1880—James Scott, Castle Street, do.

- *Robert Service, Laurieknowe, Maxwelltown.
 *Dr Sharp, Eccles, Thornhill.
 *James Shaw, Tynron School, Thornhill.
 April 4th, 1879—Provost Shortridge, Dumfries.
 Oct. 6th, 1879—J. Smith, Commercial Bank, Dumfries.
 *John Smith, *Courier* Office, do.
 Oct. 8th, 1880—T. Stansfield, Inland Revenue, do.
 March, 2d, 1877—J. Gibson Starke of Troqueer Holm, Dumfries.
 *P. Stobie, Assembly Street, do.
 Feby. 6th, 1880—Dr Symons, Buccleuch Street, Dumfries.
 Oct. 6th, 1879—John Tennant, The Academy, do.
 Decr. 1st, 1876—Dr Thomson, Castle Street, do.
 April 5th, 1878—A. Thompson, Ironmonger, do.
 *James Thompson, Jeweller, do.
 Oct. 8th, 1880—Alfred Edgar Truckell, College Street, Maxwelltown.
 Jany. 9th, 1880—Rev. T. Underwood, Irongray Manse.
 March 7th, 1879—J. Watt, Rotchell House, Maxwelltown.
 Jany. 9th, 1880—T. Watson, Castlebank, Dumfries.
 Oct. 6th, 1879—Rev. R. W. Weir, Dumfries.
 J. Welsh, Waterloo Place, Dumfries.
 March 2d, 1877—J. Williamson, Terregles Street, Maxwelltown.
 March 23d, 1880—J. Wilson, Inland Revenue, Dumfries.

CORRESPONDING MEMBERS.

- J. A. Harvie-Brown of Dunipace, Larbert.
 Peter Cameron, Willowbank Terrace, Glasgow.
 John Dunsmore, Bridport, Conn., U.S.A.
 Dr Battershell Gill, Regent's Park, London.
 George Hastie, National Institution, Edinburgh.
 J. J. King, Sauchiehall Street, Glasgow.
 J. W. Lancaster, Birmingham.
 Wm. M'Ilwraith, Rockhampton, Queensland.
 R. W. MacFadzean, Co. Galway, Ireland.
 John Starforth, Architect, Edinburgh.
 Joseph Thomson, Exploring in Eastern Africa.

APPENDIX B.

Minute of Agreement between Patrick Dudgeon of and residing at Cargen, in the Parish of Troqueer and Stewartry of Kirkcudbright, President of the Dumfries and Maxwelltown Astronomical Society, and the said Patrick Dudgeon and David Barker of Woodlands, residing at Arundel House, Maxwelltown, in said Parish of Troqueer; William Halliday, Cabinet-maker, Maxwelltown; James Sloan of Barbeth, residing at Elmbank, Dumfries; James Hairstens M'Gowan, James M'Whir Hairstens, and Henry Gordon, all Writers in Dumfries; James M'Gill, Banker, there; and James Hutton, sometime residing at Charter House, Maxwelltown, now at Glencaple, Dumfries, the Members of the Committee of Management of said Society, and Robert Sharpe, Writer in Maxwelltown, the Secretary thereof, all for and on behalf of, and as representing said Society, of the first part, and James Gibson Starke of and residing at Troqueer Holm, Maxwelltown, President of the Dumfriesshire and Galloway Scientific, Natural History, and Antiquarian Society, and the said James Gibson Starke, William Lennon, residing in Brooke Street, Dumfries; Thomas Jackson, Nith Place, Dumfries; Peter Stobbie, Nith Street, Dumfries; William Adamson, Brooke Street, Dumfries; George Robb, Rhyne House, Dumfries; James Lennox, Edenbank, Maxwelltown; James Hutton, Glencaple, Dumfries; John Maxwell, King Street, Maxwelltown; James Watson Kerr, The Academy, Dumfries; James Moodie, David Street, Maxwelltown; and James Gilchrist, Doctor of Medicine, Linwood Villa, Dumfries, the Members of the Committee of Management of said last-mentioned Society, and Robert Service, Laurieknowe, Maxwelltown, the Secretary thereof, all for and in behalf of, and as representing said last-mentioned Society, of the second part.

The parties hereto considering that negotiations have for some time been in progress between the two above-mentioned Societies for depositing in the Museum of the said Astronomical Society of certain Antiquarian and Natural History Specimens and Books, at present belonging to, or in the possession of, or which may during the subsistence of this Agreement come into the possession of the said Natural History and Antiquarian Society; that on Sixth August, Eighteen Hundred and Eighty, a deputation from the said Natural History and Antiquarian Society attended a Meeting of the Committee of Management of the said Astronomical Society, at which Meeting Draft Proposals for the carrying out of the said object were submitted and considered, and the parties having now arrived at an agreement regarding the matter, it is right and proper the same should be reduced to writing, and made binding on both sides. Therefore it is agreed between said Societies as follows:—

First.—That the said Natural History and Antiquarian Society shall deposit in the Museum of the said Astronomical Society (the buildings containing which Museum are commonly known and called by the name of "The Observatory") such of the Antiquarian and Natural History Specimens and Books presently belonging to, or in the possession of, or which may during the subsistence of this Agreement come into the possession of the said Natural History and Antiquarian Society, as shall be selected by the President for the time being of the said Astronomical Society, for exhibition or perusal in the same way and under the like conditions as articles of a similar nature at present in the Museum, the property of the said Astronomical Society, a duplicate list of said Specimens and Books shall, when the same are selected and deposited in the said Museum, be prepared and signed by the Presidents or Secretaries of the two Societies,

one of which lists shall be kept by each of the said Societies, and to these lists shall be added from time to time such other Specimens and Books as may come into the possession of said Natural History and Antiquarian Society, and be selected as aforesaid and deposited in said Museum.

Second.—The said Specimens and Books shall, before being deposited, be labelled as the property of said Society second above-mentioned. Further, the said Natural History and Antiquarian Society shall not be called upon to furnish cases or other accommodation for the depositing of any of its Antiquarian and Natural History Specimens; but with regard to the Books to be deposited, it shall be at the expense of providing a case therefor, which shall be placed in such portion of the Museum as shall be selected by the President of the said Astronomical Society.

Third.—That the Members of the said Natural History and Antiquarian Society shall assist to the best of their ability the said Astronomical Society in forming and maintaining a Natural History collection, representative of the natural productions of Dumfriesshire and Galloway.

Fourth.—Members of the said Natural History and Antiquarian Society desirous of pursuing their study of Natural History, &c., shall be admitted gratis to the Museum on presentation to the Curator or Curatrix of a written order to that effect, duly signed by the Secretary of either Society; but every such Member so admitted gratis shall on each occasion of admission sign his name in a book to be kept in the Observatory for the purpose, in which the date of each visit shall also be entered. Other Members of said Natural History and Antiquarian Society shall be admitted to the Observatory and Museum on any lawful day of the week (Saturdays excepted) on production of their Ticket of Membership and payment by them of one-half the usual admission fee for such day, with all privileges open to other public visitors. Further, Books and Specimens of Natural History, &c., belonging to the said Natural History and Antiquarian Society shall be temporarily borrowed by Members of that Society only on application to the Curator or Curatrix of the Observatory, to whom they shall grant a borrowing receipt for the same.

Fifth.—This Agreement shall be terminable by either party on giving three months' notice in writing to the other party of the intention so to terminate it, on the expiry of which period the said Natural History and Antiquarian Society shall forthwith remove the whole property belonging to it in said Museum, and that at its own expense. Further, a letter addressed by the Secretary of the one Society to that of the other Society intimating such intention of terminating this Agreement, and duly posted, shall be considered as sufficient notice thereof.

Sixth.—The said Astronomical Society is expressly understood to undertake no responsibility for the safe custody of the articles which may be deposited, as before-mentioned, in virtue hereof, nor for any damage which may be done to them by fire or otherwise—the said Natural History and Antiquarian Society, however, being entitled to insure against loss by fire or otherwise the property belonging to it, but that always in its own name and at its own expense.

Seventh.—This Agreement shall be signed in duplicate, and one copy kept by each of the said Societies. In witness whereof these presents written upon this and the three preceding pages of stamped paper by William M'Dowall, apprentice to Walker & Sharpe, Writers in Maxwelltown, are subscribed on each page by the parties hereto as follows, videlicet:—By the said James Gibson Starke, as President of the said Dumfriesshire and Galloway Scientific, Natural History, and Antiquarian Society, and also as a Member of the Committee of Management thereof, George Robb (otherwise named George H. Robb), William Lennon, James Watson Kerr, William Adamson, James Lennox, and Robert Service, all at Dumfries, upon the Fourth day of March, One Thousand Eight Hundred and Eighty One Years, before these Witnesses—William Alexander

Francis Browne Coupland, Manager of the Nithsdale Mills, Dumfries, and residing in Dumfries, and Alfred Edgar Truckell, Clerk to the said Walker & Sharpe; by the said James Gilchrist, James Moodie, John Maxwell, Peter Stobbie (otherwise named Peter Stobie), and Thomas Jackson, all at Maxwelltown, upon the Thirtieth day of said month of March and year last mentioned, before these Witnesses—John Gibb, Seedsman's Apprentice, residing in Maxwelltown, and the said Alfred Edgar Truckell; by the said Patrick Dudgeon, as President of the said Astronomical Society, and also as a Member of the Committee of Management thereof, William Halliday, James Hairstens M'Gowan, and James M'Gill, and by the said James Hutton, as a Member of the Committee of Management of each of the said Societies, all at the Observatory, Maxwelltown, upon the First day of April and year last mentioned, before these Witnesses—Murray Little, Apprentice to the said Walker & Sharpe, and the said Alfred Edgar Truckell; by the said James M'Whir Hairstens, at Dumfries, upon the Second day of said month of April and year last mentioned, before these Witnesses—the said Murray Little and Alfred Edgar Truckell; by the said Henry Gordon, at Dumfries, upon the Seventh day of said month of April and year last mentioned, before these Witnesses—the said Murray Little and Alfred Edgar Truckell; by the said James Sloan and Robert Sharpe, both at Maxwelltown, upon the day, month, and year all last mentioned, before these Witnesses—the said Alfred Edgar Truckell and Murray Little; and by the said David Barker, at Moffat, upon the Twenty-sixth day of said month of April and year last mentioned, before these Witnesses—William Tait, son of and residing with Thomas Tait, Solicitor at Moffat, and Alexander Henderson, Teller in the Bank of Scotland, Moffat.

(Signed) J. Gibson Starke; Geo. H. Robb; W. Lennon; James W. Kerr; William Adamson; James Lennox; Robert Service; Peter Stobie; J. Gilchrist; Jas. Moodie; John Maxwell; Thomas Jackson; P. Dudgeon; William Halliday; James Hutton; James H. M'Gowan; Jas. M'Gill; James Hutton; J. M'W. Hairstens; H. Gordon; James Sloan; Ro. Sharpe; D. Barker; W. A. F. B. Coupland, Witness; A. Edgar Truckell, Witness; A. Edgar Truckell, Witness; John Gibb, Witness; Murray Little, Witness; A. Edgar Truckell, Witness; Murray Little, Witness; A. Edgar Truckell, Witness; A. Edgar Truckell, Witness; Murray Little, Witness; A. Edgar Truckell, Witness; Murray Little, Witness; William Tait, Witness; Alex. Henderson, Witness.

APPENDIX C.

CATALOGUE OF NATURAL HISTORY AND ANTIQUARIAN SPECIMENS, BOOKS, PAMPHLETS, &c., DEPOSITED IN THE OBSERVATORY MUSEUM, IN ACCORDANCE WITH THE MINUTE OF AGREEMENT (See Appendix B) BETWEEN THE SOCIETY AND THE OBSERVATORY SHAREHOLDERS.

LIST OF NATURAL HISTORY AND ANTIQUARIAN SPECIMENS, &c.

Specimens.	Presented by	No. in Observatory Record Book.
Two Casts of Armorial Bearings, from Sweetheart Abbey	Mr J. Faulds	5 and 6
Boss of Groined Arch (Cast), from Melrose Abbey	Mr Milne	7
Block Wood, from Lochar Moss	The late Sir W. Jardine, Bart.	8
Samian Ware, dug from the Ashpit of a Roman villa at Carlisle	Mr W. G. Gibson	9
Pick Axe, found when digging foundations of Greyfriars' Church	No record	10
Old Sword Blade, found in Lochar Moss	The late Mr Thorburn, Barnkin	11
Manacles, "Figure 8," found in Glasgow Street, at a depth of 6 feet, 1880	Mr Dickson, V.S.	12
Two Framed Cases Micro-photographs	Mr F. W. Grierson	13 and 146
Piece of Wild Boar (Clavicle, &c.), found in Lochar Moss, at a depth of 15 feet, December 4th, 1862	The late Mr Thorburn, Barnkin	14
Down from Protoma's Nest, from Central Australia	.....	15
Hedgehog (Troqueer), mounted	.....	16
Angel Fish, mounted	The late Sir W. Jardine	17
Fifteen species Crustacea	Dr Gilchrist	18 to 32
Seventeen species Marine Animals (Serpulæ, &c.)	Do.	33 to 50
Five specimens Ova of Mollusca	Do.	51 to 55
Three species of Asteridæ	Do.	56 to 58
Two skeletons Cuttle Fish	Do.	59-60
Nineteen species Zoophytes, &c.	Do.	61 to 79
Two <i>Echinus sphaera</i>	Do.	80-81
Collection of Graptolites, from Kirk-michael	Mr T. Gracie	82
Stone Hammer, Kirkmichael, 1880	Mr John Rutherford	83
Do. Irongray	.....	84
Do. (broken), Barncleuch	.....	85
Pestle Stones	.....	86-88
Stone Hammer, Carmaddie	.....	89
Cast of Skull of <i>Simia satyrus</i>	Mr Moore, Liverpool	90
Grass Mat	No record	91
Box of Lead in various stages of manufacture	The late Mr Niven, Leadhills	92

Specimens.	Presented by	No. in Observatory Record Book
Two Boxes of Bronze Spearheads, &c. (Casts), from the Originals in the Museum of the Crichton Royal Institution	Dr Gilchrist	93-94
Casts of Fossil Footprints (<i>Labyrinthodon</i> , <i>Iguanodon</i> , &c.), from originals in the Liverpool Museum	Mr Moore	95 to 99
Slab Sandstone, from Locharbriggs, showing Footprints, 1880	Mr John Rutherford	100
Fragments of Cinerary Urn, found on Broomhill, near Lochmaben, 21st August, 1867	Mr Thomas Corrie	101
Piece of Ashwood, from Arbigland, showing the burrowings of the beetle <i>Hylesinus fraxinus</i>	Mr C. Black	102
Ball, from a Horse's stomach, concreted round a gas burner; Auchenskeoch, 1881	Mr Dickson, V.S.	103
Two portions Antlers (Red Deer?), found at the mouth of river Urr, along with the remainder of the skeleton, in 1860	Capt. Wilson, Orchardton	104
Eggs of the Rhea and Emu, laid by domesticated birds at Castle O'er, near Langholm, 1880	Mr Bell	105-106
Models Sculptured Stones (Scottish) <i>Courier</i> (London), 1813	Mr W. G. Gibson	110
Grain Tin, used by dyers	Mr C. Anderson	111
Set of "Blackfellows" Weapons, consisting of Spear, Boomerang, Nulla Nulla, Heilamon, and Dilla Bag, from Queensland	Mr M'Kinnell	112
Rusty Hoof Fungus (<i>Polyporus ignarius</i>); Troqueer	Mr Edgar, Rockhampton	113
Thirty species Local Birds' Eggs in Eighty specimens; intercalated with the Observatory Collection	Mr W. G. Gibson	114
Celt of Porphyry; Auchenhessnane, 1881	Mr Sam. Chrystie	135
"Comb" of White Ants; Cachar, Bengal. This specimen was formed by the Ants between the tin lining of a box and its outer casing	Mr Shaw	147
Silver Cup and Apron, found with the mummy of an Inca; Lima, Peru	Mr J. Inglis	148
Two Pennies, George IV., 1797	Miss Sutherland	149
Paris Miners' Halfpenny	Mr Scott and Mr Williamson	150
Fragments Cinerary Urn	Mr Bailey	151
Tray of twelve Coins, found in St. Querdon's Well	.....	...
Collection of Marine and Fresh-water Mollusca (British)	Mr Dudgeon	152
Collection of Marine Mollusca, from Portugal	Dr Gilchrist	...
"A Wasp's Nest, and the Wasp that built it."	Mr J. J. Clark	...
	Mr Rutherford	...

Specimens.	Presented by	No. in Observatory Record Book.
Two Boxes Microscopic Preparations	Miss Mitchell	...
Fasciculus of Lichens	Dr Gilchrist	...
Two Portfolios Dried British (Local) Plants	Mr W. S. Hogg	...
Forty-three species "Carices of the Stewartry"	Mr M'Andrew	...
Six Coins—Chinese Coin; Irish Half- penny, George III., 1781; Half- penny, George III., 1817; Halfpenny, Victoria, 1854; Halfpenny, George III., 1807; and Un Decime, L'an 8, Republique Francais	Mr Wilson	...

LIST OF BOOKS,

Exclusive of Pamphlets, Books in Paper Covers, &c.

No.	Presented by
1. Communion Sermons. By J. C. 1685	No record
2. Culpeper's (Nicholas) Catalogue of Simples. 1653	Do.
3. Den Nørske Træskjaerkunst. 1878	Royal Society of Christiana
4. Flava Vegeti de re Militari. 1634 This volume belonged to the late Dr Wightman, Kirkmahoe	J. Rutherford, Esq. of Jardineton
5-9. Makerstoun Magnetical and Meteorological Observations. By John Allan Broun, F.R.S. In 5 volumes—1841-42, 1843, 1844, 1845-46 (Part I.), 1845-46 (Part II.)	The late J. A. Broun, F R S.
10. Mineralogy of Dumfriesshire. By Robert Jamieson. 1805	J. G. Starke, Esq.
11. Parish of Troqueer, a Short History of. By J. Gibson Starke, Esq. of Troqueer Holm. 1878	Do.
12-25. Smithsonian Institution, Annual Reports. In 14 volumes—1864, 1866, 1867, 1868, 1869, 1871, 1872, 1873, 1874, 1875, 1876, 1877, 1878, 1879	Smithsonian Institution, Washington, U.S.A.
26. The King's Quair, a Poem, by James I., King of Scots. By Ebenezer Thomson. Ayr, 1815	No record
27. Transactions of the Society of Antiquaries of Scotland. Vol. I. 1782-92	J. G. Starke, Esq.
28. Transactions of the Royal Irish Academy. Volume XIV., Part I. 1825. This volume belonged to Sir Walter Scott	Dr Gilchrist
29. Trevandrum Magnetical and Meteorological Observations. By John Allan Broun, F.R.S. Vol. I. 1874	The late J. A. Broun, F.R.S.
30. Do. do. Supplement. By John Allan Broun, F.R.S. 1874	Do.
Reports of the United States Geological Survey of the Territories—	
31. First, Second, and Third Annual Report, embracing Nebraska, Wyoming, Colorado, and New Mexico. 1867, 1868, and 1869	Dr F. V. Hayden

No.		Presented by
32.	Preliminary Report of Wyoming and Portions of Contiguous Territories. 1870	Dr F. V. Hayden
33.	Sixth Annual Report on Portions of Montano, Idaho, Wyoming, and Utah. 1872	Do.
34.	Survey of Colorado. 1873	Do.
35.	Do. and Parts of adjacent Territories. 1874	Do.
36.	Survey of Idaho and Wyoming, 1877	Do

LIST OF PAMPHLETS, UNBOUND VOLUMES, &C

No.	<i>American Publications.</i>	Presented by
37-40.	Annals of the Lyceum of Natural History of New York. Vols. VIII., IX., X., and XI.	The Lyceum
41-45.	Proceedings of do. 5 Parts	Do.
46.	Annals of the New York Academy of Sciences (late the Lyceum), &c. Vol. I.	The Academy
47.	Annual Report of the Comptroller of the Currency of the United States for 1878	John Jay Knox, Comptroller
48-49.	Do. do. for 1879 (two copies)	Do.
50.	Board of Public Education, City of Philadelphia, 55th Annual Report. 1873	The Board
51.	Bulletin of the United States Geological and Geographical Survey of the Territories. No. I. 1874.	Dr F. V. Hayden
52.	Dolmens in Japan. By Prof. E. S. Morse	Prof. E. S. Morse, Salem, Mass.
53.	List of Elevations West of the Mississippi River. By H. Gannett, M.E.	Dr F. V. Hayden
54.	Natural History and Distribution of Yellow Fever in the United States. By J. M. Toner, M.D.	Do.
55.	Nova Scotian Geology. By Rev. D. Honeyman, D.C.L., &c.	Rev. D. Honeyman
56-60.	Nova Scotian Institute of Natural Science. Part I. of Vol. I.; Part IV. of Vol. I.; Part I. of Vol. II.; Part III. of Vol. II.; Part IV. of Vol. IV.	.....
61.	Omori Shell Mounds, and some recent publications on Japanese Archæology. By Prof. E. S. Morse.	Prof. E. S. Morse
62-65.	Peabody Museum of American Archæology and Ethnology—8th Annual Report, 1875; 9th do., 1876; 12th and 13th do., 1880; 14th do., 1881	F. W. Paterson, Curator of the Museum
66-67.	Proceedings of the American Philo-sophical Society. Nos. 92 and 93 of Vol. XIV.	The Society
68.	Synopsis of the Flora of Colorado. 1874	Dr F. V. Hayden
69.	Traces of an Early Race in Japan. By Prof. E. S. Morse. 1879.	.....

Norwegian Publications.

- No.
- 70 Aarland, II. By C. A. Holmboe
- 71 Broholtfundet. By C. A. Holmboe
- 72 Catalogum Lepidopterum Norvegicorum.
By H. Siebke
- 73 Catalogum Coleopterum Norvegicorum.
By H. Siebke
- 74 Christianiafjordens Dybvandsfauna. By
G. O. Sars
- 75 Criminal Statistics. 1877
- 76 Det Kongelige Norske Frederiks Uni-
versitets Aaroberetning for Aaret. 1867
- 77 Det Kongelige Norske Frederiks Uni-
versitets Aaroberetning for Aaret. 1868.
- 78 Die Pflanzenwelt Norwegens. By Dr F.
C. Schubeler
- 79 En Maade at betegne Tal paa. By C.
A. Holmboe
- 80 Et lidet Fund af Mynter fra Aarhun-
drede. By C. A. Holmboe
- 81 Etudes sur les Mouvements de L'Atmo-
sphere. By C. M. Goldberg
- 82 Forklaring over nogle Ord og Udtryk i
det gamle Norske Sprog. By Johan
Fritzner
- 83 Forsatte Bemærkuniger. By M. Sars
- 84 Fund af Mynter. By C. I. Schive
- 85 Hexe Og Dakini. By C. A. Holmboe.
- 86 Index Scholarum in Universitate Regia
Fredericiana, 1868
- 87 Index Scholarum in Universitate Regia
Fredericiana, 1869
- 88 Le Glacier de Boium en Juillet, 1868. By
S. A. Sexe
- 89 Mærker Efter en listid i omegnen af
Hardangerfjorden. By S. A. Sexe
- 90 Memoires des Crinoïdes vivants. By
M. Sars
- 91 Morkinskinna. By C. R. Unger
- 92 Norges Officielle Statistik udgiven i
aaret, 1875. No. 1
- 93 Norges Officielle Statistik udgiven i
aaret, 1875. No. 2
- 94 Norges Officielle Statistik udgiven i
aaret, 1878.
- 95 Norske Broncelegeringer fra Jernalden.
By O. Rygh
- 96 Norske Vægtlodder fra 14de Aarhundrede
- 97 Om Helleristninger i Norge. By O.
Rygh
- 98 Om Individuelle Variationer. By G. O.
Sars
- 99 Om Nogle Norske Pengetegn. By C.
A. Holmboe
- 100 Om Norske Kongers Bylding og Kroning
i ældre Tid. 1873
- 101 Om Poncelets Betydning for Geometrien.
By E. Holst.
- 102 Om Spor af Romersk Kultur i Norges
ældre Jernalder. By A. Lorange

(All presented by the
Kongelige Norske Uni-
versitet i Christiania).

- | | |
|---|---|
| <p>No.
103 Om Stratifikationens Spor. By Dr Theodor Kjerulf
104 Om Vægtem af nogle Smyker. C A. Holmboe
105 Om Vegetations for holdeneved Sognefjorden. By A. Blytt
106 Om Vildsviintypen paa geliske og indiske Mynter. By C. A. Holmboe
107 On Giants' Cauldrons. By S. A. Sexe
108 Rosenborg—Notes on the Chronological Collections of the Danish Kings. Translated by Charles Shaw.
109 Rune Indskriften paa Ringen i Forsa Kirke. By Sophus Bugge, Esq.
110 Some Remarkable Forms of Animal Life from the Great Deeps off the Norwegian Coast (<i>Genus Brisinga</i>). By G. O. Sars
111 The Ancient Vessel found in the Parish of Tune, Norway, 1872
112 Thomas Saga Erkybiskups. By C. R. Unger
113 To Norske Oldsagfund By O. Rygh
114 To nyfundne Norske Rune-Indskrifter fra den ældre Jernalder. By Sophus Bugge
115 Transfusion and Plethora. By Jakob Worm Müller
116 Windrosen des Südlichen Norvegens. By C. de Seue
117 Zoological Researches. By G. O. Sars.</p> | <p>(All presented by the Kongelige Norske Universitet i Christiania).</p> |
|---|---|

PAPERS BY THE LATE JOHN ALLAN BROWN. F.R.S.

- | No | Presented by |
|---|-----------------------|
| 118 Decennial Period in the Range and Disturbance of the Diurnal Oscillations of the Magnetic Needle, and the Sun Spot Area | John A. Broun, F.R.S. |
| 119 List, with some notice of the contents of Scientific Works and Papers | Do. |
| 120 Note on the Bifilar Magnetometer | Do. |
| 121 Observations magnétiques faites à Makerstoun (Ecosse) et Trevandrum, près du Cap Comorin | Do. |
| 122 On the Annual Variation of the Magnetic Declination | Do. |
| 123 On the Influence of Height in the Atmosphere on the Diurnal Variation of the Earth's Magnetic Force | Do. |
| 124 On the Period of Hemispherical Excess of Sun Spots | Do. |
| 125 On the Sun-Spot Period and the Rain-fall | Do. |
| 126 Simultaneous Variations of the Barometer in India | Do. |

No.	Presented by
127 Supplement to Vol. XXII. of the Transactions of the Royal Society of Edinburgh (Makerstoun Observations)	John A. Broun, F.R.S.
128 Sur la simultanéité des variations barométriques dans les hautes latitudes des deux hémisphères	Do.
129 The Mean Directions and Distribution of the Lines of equal Barometric Pressure	Do.
130 The Variations of the Daily Mean Horizontal Force of the Earth's Magnetism produced by the Sun's Rotation and the Moon's Synodical and Tropical Revolutions	Do.

REPORTS, PROCEEDINGS, AND TRANSACTIONS OF SCIENTIFIC SOCIETIES.

No.	Presented by
131 Belfast Naturalists' Field Club—Tenth Annual Report, 1872-73	The Club
132 Botanical Society of Edinburgh—Transactions, Part III. of Vol. VII., 1863	The Society
133 Botanical Society of Edinburgh—Presidential Address (1871), by Sir Walter Elliot	Sir Walter Elliot, K.S.I., F.L.S.
134 Cumberland Association for the Advancement of Literature and Science—Transactions, Part II., 1876-77	The Association
135 Devon and Cornwall Natural History Society—Annual Report for 1862-63 Epping Forest and County of Essex Naturalists' Field Club—	The Society
136 Rules of the Club	The Club
137 Epping Forest and County of Essex Naturalists' Field Club—Inaugural Address	Do.
138-141 Epping Forest and County of Essex Naturalists' Field Club—Transactions, Part I., II., III., IV.	Do.
142 Geological Society of Glasgow—Transactions, Part II. of Vol. II., 1866	The Society
143 Glasgow Archaeological Society—Address on the Recent Progress of Archaeology, 1866	The late Dr Stuart
144 Hawick Archaeological Society—Proceedings, 1869	The Society
145-6 Liverpool Naturalists' Field Club—Annual Reports for 1863-4 and 1864-5	The Club
147-165 Montrose Natural History and Antiquarian Society—Annual Reports for the Years 1857, 1858, 1859, 1860, 1861, 1862, 1864, 1865, 1866, 1867, 1870, 1871, 1872, 1873, 1874, 1876, 1877, 1878, 1879	Dr Gilchrist
166 Philosophical Society of Glasgow—Proceedings, No. 3, 1866-67	The Society
167-168 Scottish Meteorological Society—Journals for January and October, 1864	The Society

No.	Presented by
169 Society of Antiquaries of Scotland— Proceedings, Part 2, 1854	The Society
170 Society of Antiquaries of Scotland— Presidential Address (1859) by Lord Neaves	The Society
171-172 West London Scientific Association and Field Club—Proceedings Vol. I., Part III.; Annual Report, 1875-76	Dr Gilchrist
173 Yorkshire Philosophical Society— Annual Report for 1875	The Society

MISCELLANEOUS PAPERS.

No.	Presented by
174 Account of Ogham Inscriptions. By Sam. Fergusson, Q.C.	Mr Fergusson
175 Additional Observations on the Fungus Disease affecting Salmon and other Fish. By A. B. Stirling	The Author
176 The same. No. 2	Do.
177 British Graptolites. By W. Carruthers, F.L.S.	Do.
178 Catalogue of the Curiosities and Coins in the possession of J. Gibson Starke, Esq., M.A., F.S.A., &c.	Mr Starke
179 Catalogue of the Society Library, Dumfries. 1851	No record
180 Condition of the Salmon Fisheries of England and Wales in 1861. By Sir W. Jardine, Bart.	The Author
181 <i>Fucus distichus</i> as an Irish Plant. By W. Carruthers, F.L.S.	Do.
182 Lecture on the Advantages of the Study of Natural History. By Edwards Crisp, M.D.	Do.
183 Meteorological Record kept at the Crichton Royal Institution for the year 1867 (MS.)	Dr Gilchrist
184 On Some Species of Oaks from China. By W. Carruthers, F.L.S.	The Author
185 On Splenic Apoplexy (so-called). By Edwards Crisp, M.D.	Do.
186 Parts involved in the Process of Defolia- tion. By W. R. M ^c Nab	Do.
187 Recollections of the Lodge of Free- masons of Thornhill. By David Murray Lyon	Do.
188 Report of a Committee upon the Experiments conducted at Stor- montfield, near Perth, for the Arti- ficial Propagation of Salmon. 1857	The late Sir W. Jardine, Bart.
189 Report of First Annual Conference of the Cryptogamic Society of Scotland, held at Perth, September, 1875	No Record
190 Sculptured Stones of Eastern Scotland. By Ralph Carr, F.S.A.	Mr Carr
191 Second Report on the Derbyshire County Lunatic Asylum	Dr Gilchrist

No.	Presented by
192 The Established Churches of Dumfries and the Building of the Mid-Steeple	W. R. M'Diarmid
193 The Geology of Moffat. By W. Carruthers, F.L.S.	The Author
194 The Lamb Disease. By Edwards Crisp, M.D.	Do.
195 The Runic Rock at Barnspike, Cumberland, by the Rev. John Maughan, B.A.	Do.
196 The Shell Mounds of Omori. By Prof. E. S. Morse	The University of Tokio, in Japan

The following is a list of the names of the
 persons who have been appointed to the
 various offices of the Board of
 Education for the year 1870.
 The names are arranged in alphabetical
 order of their surnames.
 The names of the members of the
 Board are as follows:

Board of Education
 1870

No. 3.

THE TRANSACTIONS

AND

JOURNAL OF PROCEEDINGS

OF THE

DUMFRIESSHIRE AND GALLOWAY

SCIENTIFIC, NATURAL HISTORY,

AND

ANTIQUARIAN SOCIETY.



SESSIONS 1880-81, 1881-82, 1882-83.

PRINTED AT THE COURIER AND HERALD OFFICES, DUMFRIES

1884.

THE HISTORY OF THE

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OFFICE - BEARERS AND COMMITTEE.



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JAMES GILCHRIST, M.D., Linwood, Dumfries.

Vice=Presidents.

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Mr J. BARBOUR.

Mr J. DAVIDSON.

Mr R. CHRYSTIE.

Mr S. M. BROWN.

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R U L E S .



1st. The Society shall be called the "DUMFRIESSHIRE AND GALLOWAY SCIENTIFIC, NATURAL HISTORY, AND ANTIQUARIAN SOCIETY."

2nd. The aims of the Society shall be to secure a more frequent interchange of thought and opinion among those who devote themselves to Scientific, Archæological, and Natural History studies; to elicit and diffuse a taste for such studies where it is yet unformed; and to afford increased facilities for its extension where it already exists.

3rd. The Society shall consist of Ordinary, Honorary, or Corresponding, and Life Members. The Ordinary and Life Members shall be persons resident in Dumfriesshire and Galloway, present and admitted at a Public Meeting called for the purpose on 3rd November, 1876, and those who shall afterwards be proposed by two Members (to one of whom the candidate shall be personally known) and admitted at an Ordinary Meeting of the Society by a vote of the majority present. The Honorary or Corresponding Members shall consist of persons distinguished for attainments connected with the objects of the Society, who cannot attend as Ordinary Members, and who shall be proposed and admitted at an Ordinary Meeting in the same way as Ordinary Members.

4th. Life Members shall on election contribute the sum of Two Guineas to the funds of the Society. Ordinary Members shall on election pay Two Shillings and Sixpence entry fee, and contribute annually the sum of Two Shillings and Sixpence in advance, or such other sum as may be fixed at an Annual Meeting. Ladies joining the Society as Ordinary Members will be exempt from entry fee.

5th. The Office-bearers of the Society, who shall be Ordinary Members, shall consist of a President, four or more Vice-Presidents, Secretary, Assistant Secretary, Treasurer, and a Committee consisting of ten Members (five to form a quorum), holding office for one year only, but being eligible for re-election at the Annual Meeting of the Society.

6th. The Ordinary Meetings of the Society shall be held on the

first Friday of each month, and shall continue during winter, beginning in October and ending with April, and at which the ordinary business of the Society will be transacted, papers read and discussed, and objects of interest examined.

7th. Field Meetings shall be held during the summer, beginning with May and ending with September, to visit and examine places and objects of interest, to give field demonstrations, to collect specimens, and otherwise carry out the aims of the Society, arrangements for which shall be made at the last meeting of each Winter Session.

8th. The Annual Meeting of the Society shall be held on the first Friday of October, being the first meeting of the Winter Session, at which Office-bearers and Members of Committee shall be elected for the ensuing year, reports—general and financial—for the past year will be received, and proposals for the extension and improvement of the Society will be heard and discussed.

9th. Each Member may introduce a friend to any Ordinary or Field Meeting of the Society—such friend not to be admitted more than twice during the same year.

10th. The Secretary shall keep a minute book of the proceedings of the Society, and a register of the Members—Life, Ordinary, and Honorary or Corresponding; and shall give in a report of the Society's proceedings at the Annual Meeting.

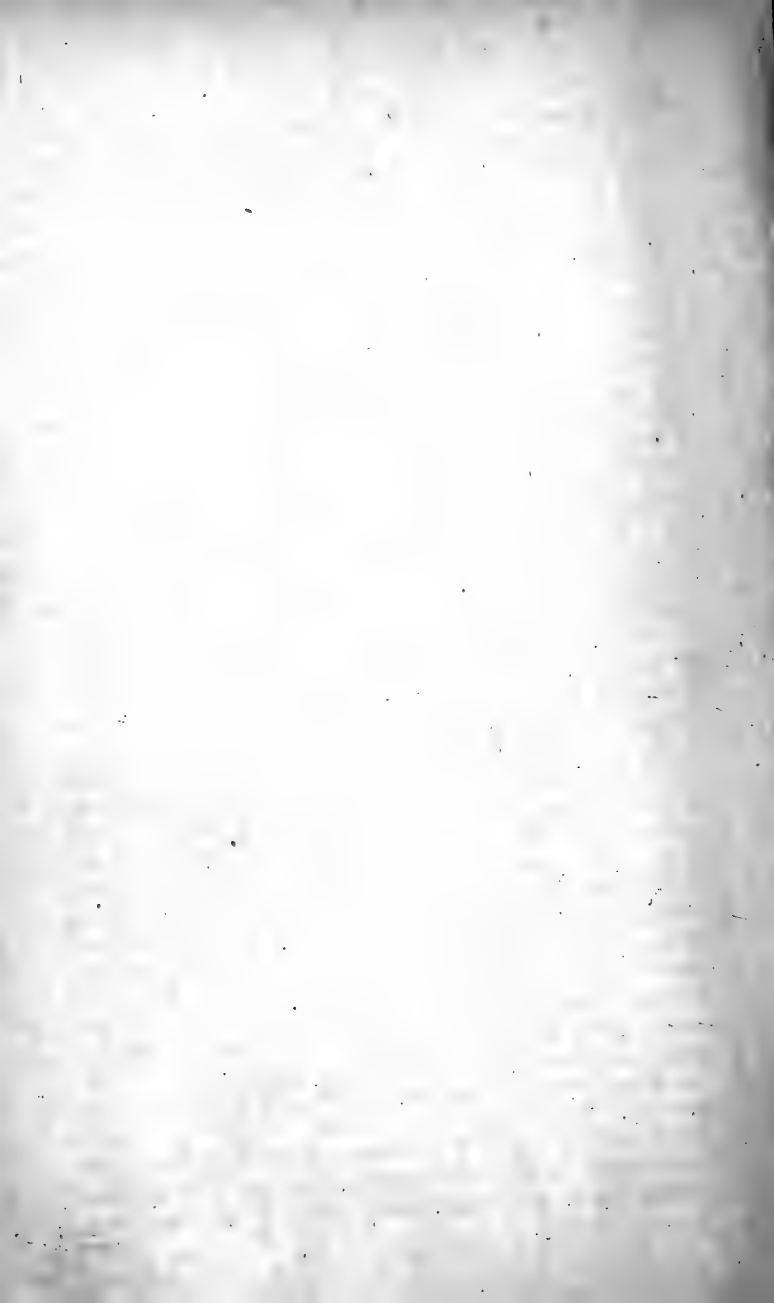
11th. The Treasurer shall collect and take charge of the annual subscriptions and funds of the Society, and make payments therefrom, under the direction of the Committee, to whom he shall annually submit an account of his intromissions, to be audited and prepared for submission to the Society at its Annual Meeting.

12th. Alterations and Repeals of the foregoing Rules, and new or additional ones, shall only be made by three-fourths of the Ordinary Members present at any meeting of the Society, of which notice shall have been given at the previous monthly meeting.

13th. The Secretary shall at any time call a meeting of the Society, on receiving the instructions of the Committee, or the requisition in writing of any six Ordinary Members.

14th. All papers read before the Society shall become its property.

15th. All Members whose subscriptions have been unpaid for fifteen months shall have their names deleted from the roll of Membership if, after receiving notice from the Treasurer, they still neglect to pay.



DUMFRIESSHIRE & GALLOWAY
SCIENTIFIC, NATURAL HISTORY, AND
ANTIQUARIAN SOCIETY.



TRANSACTIONS.

SESSION 1880-81.

8th October, 1880.

ANNUAL MEETING.

Mr J. GIBSON STARKE, President, in the Chair.

Twenty-two present.

New Members.—Messrs Scott of Broomlands; Martin, Town Clerk; G. Gray Philips, Rosefield; John Costin, Laurieknowe; J. Brown, Drumsleet; A. E. Truckell, Maxwelltown; J. S. Stansfeld, Inland Revenue; and J. Longmore, Industrial School.

Donations.—Report of Geological and Geographical Survey of the Territories of Idaho and Wyoming, The Shell Mounds of Omori, The 12th and 13th Annual Reports of the Peabody Museum of Archæology; Report for 1878 of the Smithsonian Museum, U.S.A.; Pair of old manacles recently found, at a depth of 6 feet, when digging a drain in Glasgow Street, Maxwelltown; and 12 Micro-photographs, mounted and framed, presented by Mr F. W. Grierson, Chapelmount.

Exhibits.—Mr F. W. Grierson brought under the notice of the meeting a remarkable deposit of peat recently exposed near Rae Street when excavating foundations for new houses, together with a number of specimens picked up there a few days ago by Dr Gilchrist and himself, consisting of various pieces of birch and other woods,

one of which was penetrated by a green fungus, supposed to be *Peziza crucifera*. There were also in the collection various nuts, seeds, and debris of coleopterous insects. Mr Rutherford, Jardington, exhibited a fine stone celt found lately on the farm of Whitehill, Kirkmahoe, on moss land, and in proximity to bog oaks. Mr James Culton of Dildawn sent for exhibition a fine albino specimen of the common mole—colour, pale cream, with orange patches on abdomen and throat.

The Secretary (Mr R. Service) tabled the old minute book of the former Society, a collection of sea weeds, and several publications. These and a few other articles, he explained, had been in possession of the late Procurator-Fiscal for Dumfriesshire, and had been recovered through the courtesy of Mr Fenton. He further stated that there had been in the Society's cabinet for many years four fine old volumes of the sixteenth century, each bearing the inscription of the Hutton Library, belonging to the Presbytery of Dumfries; and that they had been returned to the Library, from which it was ascertained they had been missed.

The Treasurer (Mr Adamson) submitted his annual statement, showing—Income, £21 3s 8d; Expenditure, £20 4s 6d; balance to credit of Society, 19s 2d.

The Secretary read his report for the year. During the session 29 new members were enrolled, and 28 struck off, leaving a total membership of 108 ordinary and 12 corresponding members. Fifty-five books and pamphlets were presented by individuals and kindred Societies in various parts of the world; the generosity of the American Societies in this respect calling for special acknowledgment. Among the donations received by the Society in the course of the session were a splendid collection of 200 zoological specimens from Dr Gilchrist, and 34 species of carices from Mr J. M'Andrew, New-Galloway.

The President, Secretary, Mr Robb, and Mr Lennon, were appointed a Committee to prepare the Society's Transactions for publication.

On the motion of Mr James Lennox, it was agreed to alter Rule 5, to the effect that there may be three or more Vice-Presidents, instead of one only.

The meeting then proceeded to the election of Office-Bearers and Comitée of Management, with the following result:—President, Mr J. Gibson Starke of Troqueer Holm; Vice-Presidents,

Sheriff Hope, Mr T. R. Bruce of Slogarie, and Mr J. Neilson, M.A., Dumfries; Secretary, Mr R. Service; Assistant Secretary, Mr James Lennox; Treasurer, Mr Adamson; Committee (in addition to above), Dr Grierson, Messrs Watt, Lennon, Maxwell, Halliday, A. B. Crombie, and J. W. Kerr. Messrs Moodie and Kerr were appointed Auditors.

Draft minute of agreement between the Observatory shareholders and this Society (as proposed by the former) was next considered.

Note.—The agreement effected subsequently between the two bodies is printed in Appendices to last published "Transactions."

5th November, 1880.

Sheriff HOPE, Vice-President, in the chair. Twenty-four present.

New Members.—Rector Chinnock, Dumfries; and Mr Milne, Cintra Villa.

Donations.—By Mr W. Gibson, a number of pieces of Samian ware found in an ash-pit of a Roman villa near Carlisle, at a depth of 10 feet.

Exhibits.—By Mr M^cMeekan, piece of fossil sandstone; by Mr J. Wilson, the cast skin of an adder found by him at Woodhead of Troqueer; by Mr John Fairley (a young Dumfriesian located on the West Coast of Africa), specimens of native workmanship procured in the Ashantee and Niger countries, and which he described; from Mrs Gilchrist Clark of Speddoch, a splendid portfolio of 36 original coloured drawings of local fungi, representing nearly 100 species; from Mr Milne, fine gold coin (larger but thinner than a sovereign) of the reign of James I. of Scotland; by Mr Gibson, a Scoto-Scandinavian silver brooch, found at Drumcoltran, Kirkgunzeon, with reference to which a paper was read, stating that it was got under a stone at a depth of three feet, together with a thick plain silver ring, one inch in diameter, and a silver coin of Julius Cæsar, the whole being embedded in a black soft pulp, evidently decomposed leather.

Papers.—A paper was read from Dr Gilchrist on "The Peat Formation at Newall Terrace, Dumfries," in which the writer enumerated the objects found in the peat by Mr F. W. Grierson

and himself, shewn at last meeting, and mentioned that the coleopteral remains consisted of the elytra (or wing-sheaths) of the beetle *Douacia comari*, which still occurs in Lochar and other mosses in the neighbourhood. The paper also dealt with the geological relations of moss patches in the vicinage of Dumfries.

An amusing paper was read from a member who desired to withhold his name, and who raised a becoming protest, under the Scripture "Remove not the ancient landmark, which thy fathers have set up" (Proverbs xxii. 28), against the removal of the last stone of a megalithic circle which once stood on Greystone Flat. At the desire of the meeting the Chairman undertook to see the tenant of the place on the subject, and report.

An interesting communication was read from Mr W. M'Ilwraith, Brisbane (now of Rockhampton), entitled "First Impressions of Queensland," and describing such members of the Flora and Fauna as he had met with during the few months he had resided in the colony.

3rd December, 1880.

Mr J. GIBSON STARKE, President, in the Chair.

Twenty-two present.

New Members.—Messrs J. D. Fairley, Dair, Scott, Lawson, and Barbour (architect).

Donations.—By Mr Gracie, Kirkmichael House, collection of graphtolite fossils; by Mr Rutherford of Jardington, a rare old book on the Military Art, by Flavius Vegitius Renatus; by Mr Milne, cast of boss of groined arch from Melrose Abbey.

Exhibits.—By Mr Shaw, Tynron, large stone celt recently found by Mr Brown on his farm of Bennan; by the Secretary, a raven, shot the day before in the Stewartry, and a specimen of the silver-striped hawk moth (*Chærocampa celerio*), procured at Edenbank in October.

The Chairman read an interesting paper, entitled "The Volunteers in Dumfriesshire at the close of the last century."

The matter of printing the "Fauna and Flora" of the district was remitted to the Committee on Transactions.

Carniverous Plants.—Mr J. Wilson read a very interesting paper on "Carnivorous Plants," illustrated by numerous dried specimens and microscopical drawings. He said that although

some of these plants were known for a long time, it was only in 1874 that public attention was directed to the fact that these plants assimilated their food by means of their leaves. Having briefly referred to some of Darwin's experiments, he proceeded to describe the different plants, with special reference to our local species. These plants have been classified into four natural orders, comprising 15 different genera, and only three of these are local, viz.:—*Drosera*, *Pinguicula*, and *Utricularia* or bladderwort. He next referred to numerous experiments which he performed during the summer on *Drosera* and *Pinguicula*, the results of which were that the tentacles of the *Drosera* commence to secrete the viscid fluid immediately a nitrogenous substance is placed on the leaf, but it takes 10-15 minutes before these tentacles clasp the object. Also, the fluid which was secreted on the outer tentacles, if these cannot touch the object, becomes absorbed by them again, while the quantity secreted on the inner tentacles is considerably increased. He also noticed that the *Pinguicula* are not so voracious as the sundews.

7th January, 1881.

Rev. J. FRASER in the Chair. Eleven present.

Donations.—By Mr Shaw, Tynron, copy of *Graphic* containing article by him on "Growth of Reason in Animals;" by Mr J. Wilson, six old coins; by Mr John Rutherford, Kirkmichael, a fine geological collection, including a massive stone hammer, antimony ores, and a slate of Locharbriggs sandstone, bearing several supposed reptilian footprints.

Exhibits.—By Mr John Maxwell, a branch of the cork tree, and a curious stone, probably water-worn, of nearly the exact shape of the human foot; by Mr Rutherford, a number of photographic transparencies.

A short paper by Rector Chinnock, Dumfries Academy, was read, consisting of a translation of the title-page and notes on the text of the volume on the Military Art by Flavios Vegetius Rhenatus, presented to the Society at last meeting.

Carices of Colvend.—The Chairman read a paper on "The Carices of Colvend," in the course of which he stated that of the 45 species proper to Scotland Colvend has 24. Of these, however,

some are rare and local, being found only in single places in a wide district of country; namely, *C. limosa*, found only in Barscraigh Loch [it grew in Maxwelltown Loch some 30 years ago, but is now supposed to be extinct there]; *C. filiormis*, found only in Barscraigh Loch; *C. pendula* and *C. extensa*, and *C. punctata*. The last is the rarest of our carices. It was found by the Chairman and the Rev. Mr Farquharson of Selkirk some six years ago in three places in the parish of Colvend. A specimen of it was sent to Edinburgh for identification; but the botanists there failed to perceive the distinctive peculiarities of the carex. It was then sent to Mr Peter Gray, a Dumfries botanist residing in London, who placed it before the editor of the *Journal of Botany*. That gentleman pronounced it to be *C. punctata*, and stated that there was no record of another example of it having ever been found in Britain, though it was known to exist in Ireland. This specimen is now preserved in the British Museum.

Carabus Glabatus.—Mr Lennon read a short paper on the occurrence of this rare beetle on the top of Cairnsmore of Fleet in June, 1880. Mr Andrew Murray in his Catalogue of the Coleoptera of Scotland gives no particular locality for *C. glabatus*, but merely notes "North of Scotland, not common." Mr Lennon infers from this that Mr Murray never met with it. Perhaps the finest local collection of Coleoptera ever made was that of the late Rev. W. Little, Kirkpatrick-Juxta, which was sold in London after his death for £500. Little and Murray were very friendly, and the former contributed much valuable information to the latter when compiling his catalogue. As no mention is there made of *C. glabatus* south of the Perthshire mountains, Mr Lennon concludes that Little never met with it in Upper Annandale. Indeed from all he could learn, this specimen of his, found on Cairnsmore, was the first recorded in the South of Scotland.

4th February, 1881.

Mr WATT, Rotchell House, in the Chair.

Nineteen present.

Donations.—Four parts of Transactions of Epping Forest and County of Essex Field Club.

Report of Transactions Committee was submitted and adopted.

Dr Sharp, Eccles House, and Dr Grierson, Thornhill, were delegated to the York meeting of the British Association.

Exhibits.—By Mr Scott, Castle Street, fine specimens of the Black Scotor (*Oidemia*) obtained at Carsethorn.

Bryology of the Glenkens.—Mr J. M'Andrew, New Galloway, communicated the following paper on "The Bryology of the Glenkens."

The four parishes of the Glenkens are peculiarly favourable for the growth and development of cryptogamic plants. Sharing in the general humidity of the rest of the west of Scotland, and possessing a diversified surface of mountains, moors, marshes, bogs, rocks, glens, woods, and rivers, the district has quite a profusion of mosses, hepaticæ, and lichens. Everywhere the features of its picturesque scenery are enriched by a living drapery of vegetation, while, in particular, the sub-Alpine glens, formed by the hill-streams in their course to the Ken, afford excellent ground for the successful collection of cryptogams. For instance, the Holme Glen, formed by the Garpel Burn, contains at least a hundred species of mosses. The woods in the district are not extensive, but the trees are very richly clothed with cryptogamic plants, while the ground is one rich green carpet of mosses. The geological formation of the Glenkens presents no great variety—the two prevailing rocks being granite and whinstone, forming by no means the most favourable *nidus* for mosses. Still, rocks of granitic formation have several mosses peculiar to themselves, as, for instance, some of the *Grimmias*. The absence of such rocks as micaceous schist, limestone, sandstone, and trap, excludes the mosses peculiar to these formations, and distance from the sea precludes the appearance of littoral species. It is the prevalence of the schistose rocks on Ben Lawers and in many parts of the West Highlands which partly accounts for the luxuriance and variety of the mosses found in these districts of Scotland. The Kells hills form offshoots from the 'Southern Highlands,' and lie nearly midway between the Scottish Highlands and the mountains of Wales. Though not containing such a number of rarities as these productive fields of the bryologist, yet a district which contains such rare species as *Grimmia contorta*, *Grimmia commutata*, and *Leskea pulvinata*, cannot but be highly interesting, and must have some 'very good things.' From the extreme minuteness of some species, and the great apparent similarity among others, a thorough acquaintance

with the cryptogamic botany of any district must be a work of years—a labour, however, in my opinion, far more enjoyable and interesting than the collection and study of the flowering plants. Were I to extend my researches farther, such as to Cairnsmuir of Fleet, Cairnsmuir of Carsphairn, Merrick, &c., and to Loch Dee and Loch Doon, I am confident that I would be rewarded with finding many more species. None of the Kells hills attain more than sub-Alpine height, so that Alpine mosses, strictly so-called, are wanting. On the hills, the most productive spots are the ravines, especially those sloping to the south-east. Whatever theory may be advanced in explanation of this, the fact holds good not only in regard to the Kells hills, but also to Ben Lawers and the hills of the West Highlands. Certain spots, too, to all appearance not more productive than others, are found to be peculiarly rich in good species. A good example of this is seen on the Burn-foot hill, on the east slope of Cairn Edward, where, and in the vicinity, I find such lichens as the following:—*Parmelia incurva*; varieties, *exasperata*, and *prolixa* of *Parmelia Olivacea*, *Parmelia cetrarioides*, *Parmelia pertusa*, with a new British lichen, *Lithographia Andrewii*, which I found two years ago. In all likelihood this preponderance of species of cryptogams in certain favoured spots is the result of ice or glacier action. As the fruit of personal search, I have gathered in the district about 270 species of mosses, and of these 30 during the last year. This list includes nearly one-half of all the known British species. In bogs and wet places among the hills are found most of the genus *Sphagnum*, or bog-mosses, which afford much of the material of which peat-fuel is composed. Giving a shade of reddish-brown to the rocks on which it grows in quantity, *Andræa Rothii* is common, while higher up *Andræa Alpina* is found; other species of *Andræa* are almost wanting. Of the *Weissas*, *crispula* is found at a good elevation, and *cirrhata* lower down. *Rhabdoweissia Fugax* is rarer than *Denticulata*, which is common below loose stones on the hill sides. The *Dicranums* are well represented, while the sides of the drains and the damp places on the hills are abundantly covered with species of *Campylopi*, agreeing in this respect with the West Highlands, north of the Firth of Clyde. At least seven species of this genus are common, some of them fruiting freely. The *Tortulas* are represented by such species as *muralis*, *ruralis*, *unguiculata*, *fallax*, *rigidula*, *spadicea*, *con-*

voluta, *tortuosa*, &c. Of the Extinguisher mosses (*Encalypta*), it is rather strange that I have found only one species—*streptocarpa*, on lime walls. The most common species of *Splachnum*, with their flagon-shaped fruit, are occasionally met with on the hills on dung. *Diphyscium foliosum*, and *Tetraphis pellucida* are common. The interesting genus *Grimmia* is well represented. This genus is peculiarly saxicolous, and their neat, elegant, and darkish tufts adorn the otherwise bare and weather-beaten granite rocks and boulders. *Grimmia pulvinata*, the cushion moss, is not a common species in the Glenkens, though found in abundance in the south of the county. *G. doniana* and *trichophylla*, with various species of *Racomitrium*s, almost clothe some of the Galloway dykes. Higher up on granite is found in plenty *G. Schultzia*. My best finds in this genus are *G. commutata*, on boulders by Loch Stroan, evidently washed down by the Dee from some higher station, and *G. contorta*, a very rare species, on the Milyea. The moistness of the climate is very favourable to the growth of *Orthotrichum*s, no fewer than thirteen species being found, and among these *O. Hutchinsiae*, *saxatile*, *rivulare*, *stramineum*, *rupestre crispum*, *puchellum*, *Lyellii*, &c. I have hopes of finding also *O. Drummondii*, *calvescens*, and *sprucei*. *Bartramia ithyphylla* is plentiful along the Ken, and on stones in the river itself is *Cinclidotus fontinaloides*. *Bryum*s and *Mnium*s are fairly represented, and among them, *Bryum roseum*, the most beautiful of the genus, according to some. *Aulaacomnium androgynum*, a rare moss, I find only in one spot. All the *Pogonatum*s, and nearly all the *Polytrichum*s, are found. *Neckera crispa*, a large and elegant species, covers the stems of trees and rocks in the glens, often in fine fruit. *Neckera pumila*, a much smaller species, is given as occurring near the coast in Wigtown and Dumfries. This I have not gathered. *Leskea pulvinata*, almost unknown in Scotland, I have found in the Kenmure Holms. *Anomodon viticulosus*, generally a common moss, occurs, with its soft pale green tufts, only on the rock on which Kenmure Castle stands. *Hookeria lucens* is common in some of the woods in wet places. It is one of the most beautiful of vegetable forms, both as regards its pale pellucid leaves and in its peculiar capsule, and also as having, when fresh, the odour of the sweet violet. The numerous genus of *Hypnum* is well represented by about fifty

species, being found chiefly in woods and glens. Some love wet places on the moors, as *H. revolvens*, *scorpioides*, *stramineum*, *fluitans*, &c. In addition to the very common species, I may mention rarer ones, as—*H. brevirostre*, *sarmentosum*, *giganteum*, *elodes* (very rare, near Castle-Douglas), *eugyrium*, *palustre*, *filicinum*, *elegans*, *depressum*, *flagellare* (a west of Scotland moss), *Swartzii*, *piliferum*, &c., the last eight species, except *H. flagellare*, being found in the Holme Glen. Higher up the hills, on the Milyea, such sub-alpine species as the following are found:—*Anectangium compactum*, *Cynodontium Bruntoni*, and *Polycarpum*, *Dicranum Blyttii*, *Grimmia patens*, *Zygodon lapponicum*, the curious and interesting moss *Ædipodium Griffithianum*, *Tetraplodon mnioides*, *Oligotrichum hercynicum*, and *Racomitrium lanuginosum*, covering acres of the tops of the hills with its sombre, elastic, grey carpeting. The Glenkens is a district too limited in extent to admit of any remarks as to the distribution of species. Even when rare species occur they do so sparingly. I may conclude by stating that almost all the species collected have either been confirmed or determined by the kindness of the Rev. John Fergusson, Manse of Fern, Brechin, one of our ablest British bryologists.

Note.—20th February, 1884.—Since writing the above paper, I have added a considerable number of mosses to the above-mentioned found in the Glenkens. The district, I find, is very rich in the *Sphagnaceæ*, all the British species except one (*S. Laidbergii*) and a great many varieties being found. *Sphagnum Austini* is in great abundance in Moss Raploch. All the *Polytrichums*, except *P. Sexangulare*; all the *Ulatæ*, except *Ludwigii* and *calvescensocceer*. Among other mosses the following may be noted as interesting additions:—*Fontinalis squarrosa*, *Cryphaea heteromalla*, *Barbula papillosa*, *Grimmia funalis*, *G. Montava* (a very rare *Grimmia*), *G. subsquarrosa*; among the *Hypnum*s are found *H. crassinervium*, *falcatum*, *ochraceum*, *pumilum*, *dimorphum*, *polymorphum*, and *rivulare*; *Neckera pumila*, with var. *Philippeana*, *Bartramia pomiformis*, var. *crispa*, on the Black Craig, *Dicranella cerviculata*, *Seligeria recurvata*, var. *morensis* of *Lencodon Scuiroides*, on trees at the Holme, *Dicranum Scottianum*, near Forrest, and *Bartramia Halleriana* by the side of the river Ken—all have been found since writing the above paper.

Cuculus Canorus.—Mr Adamson read a paper on this the

common Cuckoo, in which he stated that it is the only British species of the genus, that for a number of seasons he has carefully observed its earliest notes, and that invariably it was first heard on or about the 23rd of April. If the weather was genial, it might be a day or two sooner; if cold and backward, a day or two later. It was rarely heard here after the month of July.

4th March, 1881.

Mr J. G. STARKE, President, in the Chair. Nineteen present.

Observatory Agreement.—The Chairman laid on the table stamped copies of the agreement entered into between this Society and the Astronomical Society (the Observatory Society), to which the members of committee adhibited their signatures.

Donations.—By the President, Transactions of the Society of Antiquaries of Scotland (Vol. 1—1782-1792), and Jamieson's Mineralogical Description of the County of Dumfries (1805); by Mr Scott, Castle Street, four fossil bivalve molluscs and a piece of lepidodendron from Dalmellington coal mines; and by their respective Societies, Part III. of the Epping Forest Field Club's Transactions, and five parts of the Annals of the New York Academy.

The Late Mr Carlyle.—On the motion of the President, it was resolved to record the deep regret of the members of this Society at the death of Thomas Carlyle, "who was born in Dumfriesshire, attained a world-wide reputation, and is now buried in his native village of Ecclefechan."

Altered Trap.—Mr Dudgeon of Cargen communicated the following paper descriptive of "An Altered Trap occurring near Newton-Stewart."—In an exceedingly interesting paper on the "Carboniferous Rocks of the Firth of Forth Basin," which will be found in Vol. XXIX. *Transactions Royal Society, Edinburgh*, Professor Geikie notices the remarkable changes some of the trap rocks have undergone, the trap or basalt having been changed into serpentine. In most instances the whole mass has undergone a complete transformation, the upper part still retaining the characteristics of a hard compact trap or basalt. The change apparently takes place from the lower parts upwards. Professor Geikie says, alluding to a trap found at Blackburn

Quarry, "there is no line of demarkation to be drawn between the higher and lower parts of the rock; they cannot indeed be discriminated except by actual fracture and inspection, the whole mass appearing as one and indivisible." A striking instance of this metamorphic change lately came under my observation at the Black Craig Mine, near Newton-Stewart. I observed in the rubbish heap considerable quantities of a dark greenish black rock, which had been thrown out of the mines. On examination I found it of a very soft nature, readily disintegrated by exposure to the atmosphere, easily cut with a knife, and some portions of it containing amygdaloidal cavities filled with calcite. It was too soft for serpentine, but evidently of a serpentine nature. On asking the superintendent of the mine about it he said there was a vertical band of this rock running through the workings from 6 to 12 feet thick, the direction of the band being about N.E. to S.W., which exactly corresponds with the strike of the trap dyke running through the country, as is shown in the geological maps recently published. It immediately struck me this might be an instance of a transformed trap dyke such as Professor Geikie alludes to in his paper. I sent him some specimens. The rock is so soft that he found it extremely difficult to obtain satisfactory slices for microscopic examination. He says—"In the meantime I can announce with certitude that it is an altered eruption plagioclase rock or trap, the felspar and magnetite ore quite distinct, but the magnesian silicate, whatever it was, has gone. It is not a serpentine in the proper sense, but rather a serpentinized diabase or basaltic rock." The whole of the mass in question appears to have been completely transformed. I noticed nothing amongst the large quantities I examined that had the least approach to a hard trap or basalt. I found no appearance of any trap or dyke appearing on the surface in the neighbourhood. From its extreme tendency to weather and crumble down, any part of the eruption, if it ever came to the surface, must have disappeared ages ago. The external mineralogical characteristics of the rock are—Hardness, 2·5; specific gravity, 2·66; colour, dark greenish black; texture, granular; streak, light grey. Specimens of this rock and a sketch of a microscopic section sent by Mr Dudgeon were handed round amongst the members and examined with much interest.

Elfin Pipes.—A paper by Mr W. G. Gibson, entitled "Elfin

Pipes," was next read, and a large number of these ancient smoking tubes were exhibited in illustration.

Bat; and Voles.—Mr R. Service laid on the table specimens of Daubenton's Bat (*Vespertilio Daubentonii*, Leister), which he had captured at Loch Arthur, Lochaber, and other localities in the Stewartry. He found it to be much commoner and of more general distribution than had previously been suspected. He also exhibited several Bank Voles (*Arvicola glareola*, Schreiber), from Mabie, where these animals were not uncommon. The species had not hitherto been recorded from Kirkcudbrightshire.

Lincluden Excavations.—The President read a paper descriptive of recent excavations at Lincluden Abbey, not yet completed, and of the objects of interest thereby brought to light. Among the latter is what Mr Starke believes to be the effigy, in a broken condition, of Lady Margaret Douglas, daughter of the Scottish king—the figure life size, the costume that of a person of rank of the period, and the head reposing on a cushion.

1st April, 1881.

Mr GIBSON STARKE, President, in the Chair.

Large attendance.

New Members.—Mr T. Brown, Auchenhessnane, and Mr Andrew M'Kie of Anchorlee, Kirkcudbright.

Exhibits.—By the Secretary, specimens recently captured of the black variety of the Water Vol (*Ariocula amphibius*); by Sheriff Hope, a remarkable example of vegetable ternatology (procured at Drumlanrig), in the shape of what was said to be a round cluster of the cones of the pinaster, there being upwards of fifty cones in the bunch, and all growing from a central point; by the Secretary, a curious mushroom, or rather trio of mushrooms, one of the heads being of the usual size, and two others being inverted in the cap of it, on each side of the apex; by Dr Grierson, a very fine bronze goblet, recently acquired for his Museum, and which, he said, was found thirty years ago, along with two bronze plates and another goblet now irrecoverably lost,—the manufacture Romano-British, similar examples of which have been found in Wigtownshire and Wales. Dr Grierson also exhibited a very fine example of the nest of a trap-door spider from Australia.

A list of field-meetings as suggested by the Committee was submitted and approved of.

The Various Breeds of Dogs.—Dr Grierson then delivered an interesting lecture on “The Various Breeds of Dogs,” illustrated with a very full series of the skulls of several races. The lecturer first described the human skull; next he compared with this the skulls of various lower animals; and, thirdly, he compared the skulls of different races of dogs with each other, for the purpose of pointing out the most typical form, and the variations that had taken place in domestication. Alluding to the attachment of the dog to man, he remarked that the nature of a dog corresponded with its master’s. If he saw an unfriendly dog in a house, he was prepared to meet an unfriendly master. If, on the other hand, he met a kindly dog, he knew that the people who kept him would be kindly. He had never experienced an exception to that rule. Hogarth had the same idea. When he painted his own portrait and that of his dog, he produced a remarkable resemblance between the two.

DUMFRIESIRE & GALLOWAY
SCIENTIFIC, NATURAL HISTORY, AND
ANTIQUARIAN SOCIETY.

TRANSACTIONS.

SESSION 1881-82.

Mechanics' Institute, Dumfries. 7th October, 1881.

Mr NEILSON, V.-P., in the Chair.

The first meeting of this session was held here to-night. Fifteen members were present. Minutes of April meeting were read and approved of.

New Member.—Mr Seiffert, watchmaker.

Donation.—By Mr F. W. Grierson, 12 interesting Photomicrographs.

Exhibit.—Mr J. Wilson exhibited a barren frond of *Osmunda regalis*, found in Lochar Moss in July, and measuring 26 inches in length.

The Secretary's report of the past session was read and adopted.

The Treasurer submitted his annual statement, shewing a balance in hand of £8 6s 6d, as against 19s 2d in the previous year; the income having been £17 9s 2d and the expenditure £9 2s 8d.

Election of Office-bearers.—President—Mr J. Gibson Starke, M.A., F.S.A., and F.R.C.I., of Troqueer Holm. Vice-Presidents—Mr David Boyle Hope, Sheriff-Substitute; Mr J. Neilson, M.A.; and Mr J. Rutherford of Jardington. Treasurer—Mr J. Adamson. Secretary—A letter was read from Mr R. Service

requesting to be relieved of the office of Secretary ; but it was agreed to urge him to continue to discharge its duties, and he was thanked for his performance of them during the past five years. Assistant Secretary—Mr Sam. Chrystie. Committee (in addition to above)—Messrs J. Maxwell, J. Watt, J. H. Robb, J. W. Kerr, W. Lennon, J. Wilson, R. Chrystie, and J. Williamson.

11th November, 1881.

Mr GIBSON STARKE, President, in the Chair.

Twenty-six Members were present.

On the motion of the President, a minute of regret was adopted in connection with the death of Mr Gilchrist Clark of Speddoch, whose acquaintance with Scottish Archæology was extensive and intimate, and who was always ready to communicate information to this Society in regard to local antiquities.

The Secretary stated that he was unwilling to assume all the responsibility of his office, but was prepared to work with a colleague, and on his suggestion Mr A. E. Truckell was, on the motion of Mr Lennon, seconded by Mr Rutherford, elected joint-secretary.

New Members.—Mr Robinson-Douglas of Orchardton ; Mr F. R. Coles, The Hermitage, Tongland ; Mr J. Symington, Mr R. Fisher, and Mr H. C. Dickson.

Donations.—The Fourteenth Annual Report of the Peabody Museum of American Archæology, by the Trustees of the Museum ; comb of the white ant, by Mr J. Inglis, Cachar ; celt of porphyry, from Auchenhessnane, Tynron, by Mr James Shaw ; silver cup, and an apron from the mummy of an Inca, found at Lima, presented by Miss Eliza Sutherland, Eastbourne, Sussex ; Paris miner's halfpenny, by Mr Bailey ; two pennies of Geo. III., 1797, by Mr Williamson and Mr Scott.

Exhibits.—Spanish silver coin, 1635, found at Rockhall Tower, shewn by Mr T. Watson ; Spanish gold doubloon, 1788, by Rev. J. B. Johnston ; small silver coin, bearing the number 21 surmounted by the letter S, found on site of Greyfriars' Monastery, Dumfries, shewn by Mr R. Fisher ; large round copper plate, found in St. Michael's Church during recent alterations, exhibited by Rev. J. Paton ; pair of live pigeons taken from nest in Barlocco Cave on occasion of Society's visit there in May, by Mr Sam.

Chrystie ; series of all the species of wasps occurring in this district, by Mr R. Service ; Edinburgh halfpenny, by Mr Adamson.

Papers.—The President read a memorandum explanatory of tradesmen's tokens ; and also a paper, "An Antiquary's Tour in Switzerland," descriptive of his journeyings there in August and September last. The latter paper was illustrated by many photographs of scenery, historic buildings, monuments, together with exquisite specimens of Swiss wood-carving, and a few pretty groups of dried Alpine plants—Edelweiss, Alpine Ross, &c.

Mr Rutherford read a paper entitled "A Wasp's Nest, and how she built it." In the beginning of May last, he said, he observed where a wasp (*Vespa vulgaris*) had begun to build her nest. From day to day he carefully watched her operations ; and he particularly noted that when she returned with each load of pulp, she spent half her time on the small dome under which were the eggs. This he believed was for the purpose of imparting heat to the eggs from her body. Mr Rutherford also referred to the large quantities of wasps in this country in the summer of 1880, and the scarcity of these insects in the following year, when, as he believed, the cold weather which prevailed in June and July was fatal to nearly all the queens and their eggs. The nest described in the paper, dissected to shew the internal structure, was presented to the Society.

4th December, 1881.

Mr NEILSON, Vice-President, in the Chair.

Eighteen Members present.

New Members.—Mr W. M'Dowall ; Mr Irving Edgar.

Donations.—Seven coins, by Mr Forsyth, College Street ; series of 25 coins, by Mr R. Fisher ; two French sou pieces, 1692, by Mr Service ; and the Bulletin of the U.S. Geographical and Geological Survey of the Territories, sent by Dr V. Hayden, New York.

Exhibits.—By Mr Fisher, several rare old tomes, including a Huguenot Bible, 1616, "The Battle of Craignilder" (a Galloway legend in verse), and a curious collection of sermons dated from 1614 to 1680 ; by Mr R. Grierson, Chapmanleys, a potato through which a spear of couch grass had pierced a passage for itself.

Mr Fisher read a paper entitled, "Observations on Nature, and Sketches of Travel on the West Coast of Africa."

Birds that Breed in Parish of Dumfries.—Mr S. Chrystie read "An Annotated List of the Birds that Breed in the Parish of Dumfries." It was as follows:—

1. Kestrel (*Falco tinnunculus*).—Rare; Maiden Bower Craigs.
2. Sparrow Hawk (*Accipiter Nisus*).—Common; Dalscone Woods.
3. Long Eared Owl (*Otus vulgaris*).—Tinwald Downs.
4. Short Eared Owl (*Otus brachyotus*).—Rare; Tinwald Downs.
5. Barn Owl (*Strix flammea*).—Common.
6. Brown Owl (*Syrnium stridula*).—Dalscone Woods.
7. Spotted Flycatcher (*Muscapa grisola*).—Common; banks of the Nith and Dalscone Woods.
8. Dipper (*Cinclus aquaticus*).—Common near running water.
9. Missel Thrush (*Turdus viscivorus*).—Common; Dalscone Woods.
10. Common Thrush (*Turdus musicus*).—Common.
11. Blackbird (*Turdus merula*).—Very common.
12. Hedge Sparrow (*Aroccent modularis*).—Very common.
13. Robin (*Erythaca rubecula*).—Very common.
14. Redstart (*Phoenicurea rusticilla*).—Rare; Locharbriggs.
15. Sone-Chat (*Saxicola rubicola*).—Rare; Locharbriggs.
16. Whin-Chat (*Saxicola rubetra*).—Rare; Locharbriggs.
17. Wheat-Ear (*Saxicola aenanthe*).—Rare; Locharbriggs.
18. Sedge Warbler (*Salicaria phragimitis*).—Common; Auchencreiff Loch.
19. Blackcap Warbler (*Curruca atricapilla*).—Common.
20. Garden Warbler (*Curruca hortensis*).—Common.
21. Lesser White-Throat (*Curruca sylvicola*).—Rare.
22. Common White-Throat (*Curruca cinerea*).—Common.
23. Wood Warbler (*Sylvia sibilatrix*).—Very rare.
24. Willow Wren (*Sylvia trochilus*).—Not common; near Dalscone Woods.
25. Chiff-chaff (*Sylvia hippolais*).—Not common.
26. Golden Crested Wren (*Regulus cristatus*).—Common in woods.
27. Great Tit (*Parus major*).—Common in Dalscone Woods.
28. Blue Tit (*Parus cæruleus*).—Very common; near Carnsalloch.

29. Cole Tit (*Parus ater*).—Common ; near Carnsalloch.
30. Long Tailed Tit (*Parus candatus*).—Rare.
31. Pied Wagtail (*Motacilla alba*).—Very common.
32. Grey Wagtail (*Motacilla boarula*).—Common.
33. Ray's Wagtail (*Motacilla flava*).—Rare.
34. Tree Pipit (*Anthus arboreus*).—Common.
35. Meadow Pipit (*Anthus pratensis*).—Very common ; Locharmoss.
36. Sky Lark (*Alauda arvensis*).—Exceedingly common.
37. Common Bunting (*Emberiza miliaria*).—Common in Dalscone Woods.
38. Red Bunting (*Emberiza schoeniclus*).—Common ; Locharmoss and Auchencrieff.
39. Yellow Hammer (*Emberiza citrinella*).—Very common.
40. Chaffinch (*Fringilla cœlebs*).—Very common.
41. House Sparrow (*Passer domesticus*).—Very common in and near Dumfries.
42. Greenfinch (*Coccothraustes chloris*).—Common in thick hedges.
43. Goldfinch (*Carduelis elegans*).—Not common ; Dalscone and Carnsalloch woods.
44. Siskin (*Carduelis spinus*).—Very rare ; Locharbriggs.
45. Linnet (*Linota cannabina*).—Common ; Locharbriggs.
46. Bullfinch (*Pyrrhula vulgaris*).—Not common ; Tinwald Downs and Dalscone woods.
47. Starling (*Sturnus vulgaris*).—Common.
48. Crow (*Corvus corone*).—Not common ; Brunt Fir Wood.
49. Rook (*Corvus frugilegus*).—Very common.
50. Jackdaw (*Corvus monedula*).—Very common in church towers and ruinous buildings.
51. Tree Creeper (*Certhia familiaris*).—Common in woods.
52. Common Wren (*Troglodytes vulgaris*).—Very common.
53. Cuckoo (*Cuculus canorus*).—Common near Locharmoss and Locharbriggs.
54. Kingfisher (*Alcedo ispidia*).—Very rare ; near the Nith at Carnsalloch Merse.
55. Swallow (*Hirundo rustica*).—Common.
56. Martin (*Hirundo urbica*).—Common in church towers.
57. Sand Martin (*Hirundo riparia*).—Very common ; Locharbriggs Quarries and banks of the Nith.

58. Swift (*Cypselus apus*).—Common ; church towers ; Castle-bank Mill.

59. Night Jar (*Caprimulgus Europæus*).—Rare ; Brunt Fir Wood.

60. Pheasant (*Phasianus Colchicus*).—Common ; near woods.

61. Ring Dove (*Columba palumbus*).—Very common.

62. Black Grouse (*Tetrao tetrix*).—Common ; Locharmoss.

63. Red Grouse (*Lagopus Scoticus*).—Very common ; Locharmoss.

64. Partridge (*Perdix cinerea*).—Common ; Locharmoss ; Carnsalloch ; Dalscone.

65. Lapwing (*Vanellus cristatus*).—Very common in pastures.

66. Common Heron (*Ardea cinerea*).—Not common ; Brunt Fir Wood.

67. Curlew (*Numenius arquata*).—Common ; Locharmoss ; Carnsalloch Meadow.

68. Common Sandpiper (*Totanus hypoleuca*).—Common ; Locharmoss ; banks of the Nith.

69. Common Snipe (*Scolopax gallinago*).—Not common ; Locharmoss.

70. Dunlin (*Tringa variabilis*).—Not common ; Locharmoss.

71. Land Rail (*Crex pratensis*).—Common in meadows.

72. Moor Hen (*Gallinula chloropus*).—Very common near water.

73. Coot (*Fulica atra*).—Not common ; at Auchencrieff Loch.

74. Wild Duck (*Anas boschas*).—Common ; Locharmoss ; Auchencrieff Loch.

75. Teal (*Anas crecca*).—Rare ; Locharmoss ; Auchencrieff Loch.

NOTE.—The Black-headed Gull (*Larus rididimtus*) has not bred in the Parish since 1881.

By way of illustrating his paper, Mr Chrystie exhibited eggs of the various species referred to.

6th January, 1882.

Mr J. GIBSON STARKE, President, in the Chair.

Thirty-two members present.

New Members.—Mr W. Grierson of Chapelmount, Mr F. Reid, Mr J. Thompson, and Mr Smith (C. R. Institution).

Donations.—Annual Report of Glasgow Archaeological Society, 1881, from said Society ; from Mr Symington, Whinnyhill School-house, 20 coins of various dates and nationalities.

Exhibits.—By Mr Frank Grierson, specimen of the Lesser Bladderwort, *Utricularia vulgaris*, found by him in Lochar Moss ; by Dr Gilchrist, a mineral substance found near Holywood Station, which he considered to be an ærolite ; from Rev. J. Fraser, large mass of Common Barnacle, *Lepas passicularis*, found by him on Colvend shore.

Mr Rutherford exhibited a series of micro-photo transparencies, by means of the lantern, and a series of microscopic objects, projected from the lantern microscope, illustrating animal structure. He also exhibited a number of local and other views, and explained the different objects as they appeared upon the screen.

The meeting had next an opportunity of examining interesting objects by means of a number of microscopes of various construction and power belonging to Mr Rutherford, Mr F. W. Grierson, Mr Wilson, Rev. T. Bowman, Mr Davidson, and Dr T. P. Anderson Stuart.

3d February, 1882.

Sheriff HOPE, Vice-President, in the Chair.

Thirty members present.

New Members.—Rev. J. Thyrdie ; Mr James Herries.

Donations.—Proceedings of Perthshire Society of Natural Science ; Vol. I., part 1, and Vol. II., part 2, of the Transactions of the Epping Forest and County of Essex Naturalists' Field Club.

Exhibits.—By Mr Shaw, pieces of trap-rock from Tynron, with curious cup-like markings ; by Mr T. Brown, piece of steatite, picked up at Holestane ; by Mr S. Chrystie, an orange having central segments ; by Mr Rutherford, a jasper, found on Hightown Hill, Tinwald, a curious egg-shaped bit of Silurian rock, found at Jardington, and two trays of rare old coins, respecting which last he read some notes and an extract from an old work explaining why our sterling coinage has the symbols £ s d. Mr P. Stobie exhibited a volume of "Essays on Anatomy," from the French, dated 1832.

Propagation of the Filices.—Mr J. Wilson read a paper entitled "The Propagation of the Filices," illustrated by prepared speci-

mens and numerous microscopical drawings. He said:—The group of plants which is known by the name of *Filices* or Ferns forms one of the most interesting and beautiful in the vegetable world. The natural order of *Filices* is the most important section of the sub-kingdom of cryptogamia, or flowerless plants, and is distributed over the surface of the globe except the colder regions of the frigid zones. It includes about 3000 different species, which vary in size from about half-an-inch to more than 50 feet; and only 47 of these are indigenous to the British Isles. For more than 500 years these plants have excited the admiration of all classes of society, and were regarded by the superstitious to be more or less connected with the supernatural. During the greater portion of this time their method of propagation was a mystery, but it was thought that the “black spots” which were found on the backs of the fronds had something to do with it. Owing to the improvements made on the compound microscope, this vexed question of botanists was at length solved by the unceasing exertions of Nägeli and Count Suminski. The first account of the development was published by Nägeli in 1844, and, although erroneous in some particulars, it was in the right direction, but the credit is due to Count Suminski, who some years later discovered the true method. I shall not occupy your time in describing these discoveries, or the difference between them, but proceed to the subject of this paper.

If we look at the under surface of a ripe frond we find that it is more or less covered with minute reddish-brown patches resembling scales, which, if we examine closely, prove to be arranged in small groups, or in some ferns, in short lines along the margins, called sorii. I have here several fronds of different ferns on which the arrangement of the sorii may be observed with the aid of this small magnifying glass. In the polypodies (*Polypodium*), the buckler (*Lastrea*), and the shield ferns (*Polystichum*) the sorii are circular, in the spleenworts (*Asplenium*), the hart's tongue (*Scolopendrium*), and the hard fern (*Blechnum*) they are linear; while in the bracken (*Pteris*) and maiden-hair (*Adiantum*) they occur at the margin of the frond. On examining a sorus of either the polypody or *lastrea*, with 1-inch objective, we find that it is composed of a number of minute rounded capsules or pouches, supported on short stalks and arranged in a circular cluster, and these are called *sporangia*, *thecae*, or spore-cases. In the *filix lastrea*

the sporangia are covered by a thin membranous layer called the *indusium*. The presence or absence of this covering, as well as its shape, forms a distinguishing characteristic for several different species. We see in the polypody it is wanting, in the male fern it is kidney-shaped and attached at the side, in the lady fern (*Athyrium filix fœmina*) it is kidney-shaped and fringed, while in the shield fern it is circular and attached in the centre. Mr Wilson next described experiments which he made in propagating ferns from the spores, and exhibited numerous microscopic drawings of the spores during their development into the leafy expansion or prothallium. This prothallium, he said, does not develop into the true fern, but it bears on its under surface the organs of reproduction, viz. :—antheridium and archegonium ; these he described, and traced the embryo fern until the young fronds were fully developed. The result of his experience was that it takes about four to six months before the prothallium is developed, and twelve months more before the young fronds are fully formed. The length of time, however, depending on the age of the spores.

The method of propagation which I have just described is called the *natural one*, and if you will allow me, I shall briefly introduce to you another, which may be called the *artificial*. Some species of ferns possess peculiar vital properties, and although they can be propagated from spores, they may also be by cuttings. If a portion of the stipes of the common hart's-tongue be cut off so as to retain a piece of the caudex and planted in earth, covered with glass, or placed in the dark, and kept warm and moist, it springs up into a fully developed fern. If a portion of a vigorous growing frond of the *Filix Lastrea* or *Polystichum Angulare* be taken and the pinnae cut off close to the rachis on the one side, and placed under similar conditions as the hart's-tongue, young ferns spring up at the base of the other pinnae. There is one species, *Campylopus flexuosus*, which carries a young plant on the tip of its frond, and two others, *Asplenium Bulbiferum* and *Asplenium viviperum*, which bear a number of plants on their fronds. I have growing in this flower-pot four young ferns which were taken from the fronds of the parent *Asplenium bulbiferum* in June last. It was supposed that these were produced by the ripe spores remaining in the sporangia, and on their being moistened they developed into the young ferns, as is the case with some tropical plants. Without questioning the accuracy of this state-

ment, I say they are produced independently of the spores. On one of the plants before you there is a frond bearing a young one which I have watched for some months, and before noticing its progression you will observe that the parent plant has not yet produced spores. Soon after it was planted I noticed at this point a small spot of a lighter green than the rest of the pinnule, and on watching I observed the vein which runs through it gradually form into a little rounded mass, immediately nearer the base of the pinnule, while the epidermis became raised into the form of a little nodule. On several of the fronds of these plants you may observe these rounded bulbils. This increased to the size of a small pin-head when the epidermis became torn, and a tiny frond made its appearance, which is now after five months' growth about half an inch long and forked at the top. When this increases to a convenient size it may be separated from the parent by cutting off the pinnule to which it is attached, planting it in a suitable place, and covering it with a glass shade for a short time. I should like to have made a section through the point of attachment, and examined it with a high power, but as the plant is too young I must wait until a future occasion, when I hope to perform that delicate operation.

Tongland, with Notes of its Flora.—Mr F. R. Coles read a paper entitled “Tongland, with Notes of its Flora.” The paper comprised a survey of the many varied and beautiful landscape features of the parish, which lies in a triangle formed by the river Dee, the “Twynholm” Hills, and the streams forming the Spout of Auchentalloch and the Tarff, respectively on the east, north, and western boundaries. Within this space some 305 species of Flowering Plants had been collected by the author, exclusive of Junci, Cyperaceæ, and Graminæ. The rocky bank of the Dee and the hill region were especially rich in plants; but several maritime and semi-maritime species were also found, owing to the high level of the tide at the junction of the Tarff and Dee. Among the rarer or more interesting plants to be found in Tongland are several varieties of *Ranunculus aquatilis*, *Lychnis vespertina*, *Geranium lucidum*, *Enonymus Europæus*, *Poterium sanguisorba*, *Epilobium hirsutum*, *Valeriana dioica*, *Valerianella dentata*, *Andromeda polyfolia*, *Myosotis palustris*, var. *Strigulosa*, *Origanum vulgare*, *Primula veris*, *Serratula tinctoria*.

Notes on Local Ornithology.—Mr R. Service read a paper

entitled "Notes on the Local Ornithology of the last Six Months." As usually happens when we have a mild autumn and winter, more of the scarcer birds have put in an appearance than in severe weather. In hard seasons the birds go farther south to winter, and the scarce species, when they happen to call in passing, make such a brief stay that their presence is scarcely noticed. In the weather of the autumn months the birds found no cause for hurrying; but, on the contrary, frequent and violent gales detained the later migrants for weeks, when in calmer weather they would have passed rapidly southwards. Towards the end of September the quick and simultaneous departure of the *Sylviidæ* and some others was a very noticeable fact. In ordinary seasons the numbers gradually lessen day by day—or rather night after night, for it is during the night that they depart—during perhaps the entire month of September, and so gradually do they disappear that, when all have left, we hardly seem to miss them. But this was not the case last autumn, for some species left entirely within a couple of days. For instance, the Swifts were in their usual numbers up till the evening of the 6th August. I saw a few stragglers—not more than half-a-dozen—the following day, but not one afterwards in this district (although I may remark parenthetically that I saw a pair of Swifts at Ravelston, near Edinburgh, on the 26th of August). The stay of these and other soft-billed insect-eating birds is of course in a great measure influenced by the abundance or scarcity of particular kinds of food, and this again depends upon the weather. Some of the warblers can subsist upon berries after their usual food has disappeared, and instances have been often recorded of individual Blackcaps being met with long after their summer companions had gone. I can now add another instance to those that have been recorded of the stay of this species in this country till after winter had begun. This Blackcap which I now exhibit was brought to me on 29th November by a boy who had killed it with a stone, from off a rowan tree in his father's garden, which is situated behind the row of houses forming the east side of Galloway Street. The boy said he had observed the bird feeding on the rowanberries every afternoon for about a week previous. It was accompanied by another of the same species, which was seen frequently on the same tree during the first fortnight of December. It is a curious coincidence that the only Blackcap procured later

in winter than my specimen should have been procured in a precisely similar manner. Mr Robert Gray, who had the other specimen I speak of, stated "that the specimen was observed by one of the boys at Merchiston School, near Edinburgh, on the 5th January (1878), and brought down by a stone from a catapult, in the use of which these boys are certainly proficient, however much they may be behind in other attainments." [*Zoologist, Third Series, Vol. II., p. 221.*] During the most of August some very large flocks of Greenfinches were noticed in the immediate neighbourhood of Dumfries. They remained for a few weeks, and then left, and did not re-appear till the second week of January. In the last week of September, the Meadow Pipits or Titlarks were in extraordinary numbers here, and in walking through the fields in the evening, one put them up in two's and three's at almost every step. From the great numbers seen, I do not think the birds of these two species could have been of local origin. Snow Buntings were seen plentifully by the middle of October. I refer to the large migratory flocks that visit us nearly every winter, not to the stragglers that have been seen in every month of the year on some of the highest of the Galloway hills, where it is just possible they may yet be found breeding. For several winters past, Snow Buntings have visited the Stewartry in great numbers, frequenting the hillsides in open weather, and coming down to the shore and the fields when snow covered the ground. My friend and fellow member, Mr Tom Brown, Auchenhessnane, writing on Dec. 6th, with reference to Snow Buntings seen by him on the wild tract of country between Wanlockhead and Crawfordjohn, says: "On Sunday the ground was covered with snow, and they gathered down from the hills, and collected together into flocks containing several hundreds. On Monday the snow was all gone, when the birds again scattered over the hills, in pairs often, but generally in small parties." That is a very good description of their behaviour in our district during the winter months. About the beginning of November considerable numbers of the Bramblefinch, or "Cock o' the North" as they are locally termed, made their appearance. These are oftener seen about the woodlands than in the open fields. I exhibit a young male Great Grey Shrike, which was caught on 1st December in a rather singular way. It had flown at the call-birds of a birdcatcher, who was plying his vocation on the Dalbeattie road, and in its endea-

vours to get at the birds within it was caught on the limed twigs. It lived for more than a fortnight with me; I fed it with small birds, mice, soaked bread, and hemp seed. It had a capital appetite, but the food was unsuitable in some respects. It fixed the birds and mice between the wires of the top of its cage, and tore them in pieces before eating them. The species is of very rare occurrence in the Stewartry. Fieldfares and Redwings have been very seldom seen, while during October and November Song Thrushes and Missal Thrushes were exceptionally numerous. Sporting friends complain of the scarcity of Snipes and Woodcocks, and it is evident these have not reached our district in their usual numbers. A Spotted Crake was procured at Lockerbie House in September, and I had an opportunity of examining this rare species while it was in Mr Hastings' possession for preservation. The rarest bird I have to record is a Black-tailed Godwit, shot on the Nith, and sold to Mr Hastings by the young man who procured it. Mr Hastings tells me it is the first local specimen he has had in the course of his long experience. The great storms of October and November will long be remembered for the destruction of property and loss of life, both on sea and land, and these storms were not without an influence on the birds. Great numbers of Guillemots, and Razorbills, and a few Puffins were washed ashore on several parts of the Stewartry coasts. At one or two places on the Solway they might have been taken up in cartloads. This was more particularly the case after the storm of the 14th October. They were nearly all young birds, and most of them were in poor condition. A specimen of Leach's (or the Fork-tailed) Petrel was sent me which had been picked up near Carsethorn on the morning of the awful tempest that raged during the night of the 21st and 22d November. Mr Hastings also got a specimen at the same time from the same coast. These two are, I think, the first got in Kirkcudbrightshire. The species is not scarce off the outlying points of the west coast of Scotland, but it is only in the greatest storms that it seeks the comparative shelter of such places as the Solway Firth. Mr Hastings got a Little Auk in the middle of December from Mr M'Caskie, gamedealer. I have not yet learned in what part of the district this little Arctic wanderer was procured, but its occurrence here is doubtless attributable to the prevalence of stormy weather. There is a specimen of this bird in the Observatory, which was procured on the

Colvend coast about sixteen years ago, and another was got at Auchencairn by the late Mr Ivie Mackie about twelve years since. The severe gales retarded the migration of the shore birds during October to a great extent, causing them to "accumulate" in our district for several weeks. On the 12th October I saw a twenty-acre field completely covered with Lapwings. At the same time, and for about a fortnight afterwards, the number of birds on the Solway banks was most extraordinary. The great majority of these were Bartailed Godwits, Oyster Catchers, and Knots. Just outside the line of breakers opposite the rocks at Southernness Point, Scamps and Scoters were especially numerous diving above the mussel beds. As they rose and fell on the crests of the heaving waves, these birds formed many an interesting and beautiful group. Gray Plovers have not been uncommon on the Solway banks during the winter, but the larger wild fowl have been rather scarce. Barnacle-geese have been few in number, as compared with the immense flocks seen during the two previous winters. A few Wild Swans were seen in the early part of December, but the species was not ascertained. Several Mergansers were procured in November both on the sea and on inland waters. Although common in some parts of the country, they are very scarce here. A Great Northern Diver was shot on Castledykes pool on 17th November by Mr Irving Edgar. I cannot conclude this paper without drawing attention to the great good that is likely to result to our native birds by the Act passed in 1880 for the purpose of protecting them during the breeding season. In a few years we may hope to see a great increase in their numbers. Asking one of the professional gunners of the Solway one day lately how the Act was affecting him, he replied that "It has completely spoiled the best of the shooting!"—that is, during March and April, when the birds are pairing, and have put off that wariness which characterises most species during the winter months. From a naturalist's point of view, better testimony to the value of the Act could not be got. What is still needed is an Act to protect the eggs of birds. It seems quite an anomalous state of matters that people dare not shoot (say) a Hedge Sparrow, but may take its eggs with impunity. The gun-tax has also done a very appreciable amount of good in diminishing the number of idle fellows who wander along our tidal rivers and country roads, destroying everything in the shape of a bird

that they come across. If the tax were doubled in amount the birds and the revenue would be equally benefited.

2d March, 1882.

Mr NEILSON, Vice-President, in the Chair.

Nineteen present.

New Members.—Mr Campbell Boyd, yr., of Merton Hall; Mr John Cowan, Birkhill; Mr W. Allan.

Donation.—Transactions of New York Academy of Sciences (one part), presented by the Academy.

Exhibits.—By Mr R. Service, about 60 species of North American Birds, including several which occur in Britain as rare stragglers.

Mr Service read a paper entitled "*Sphinx Convolvuli* in this District," and exhibited a pair of these moths captured in the autumn of 1881. He also read a paper entitled "Notes on the Gold Coast," communicated by Mr J. D. Fairley.

13th April, 1882.

Mr STARKE, President, in the Chair.

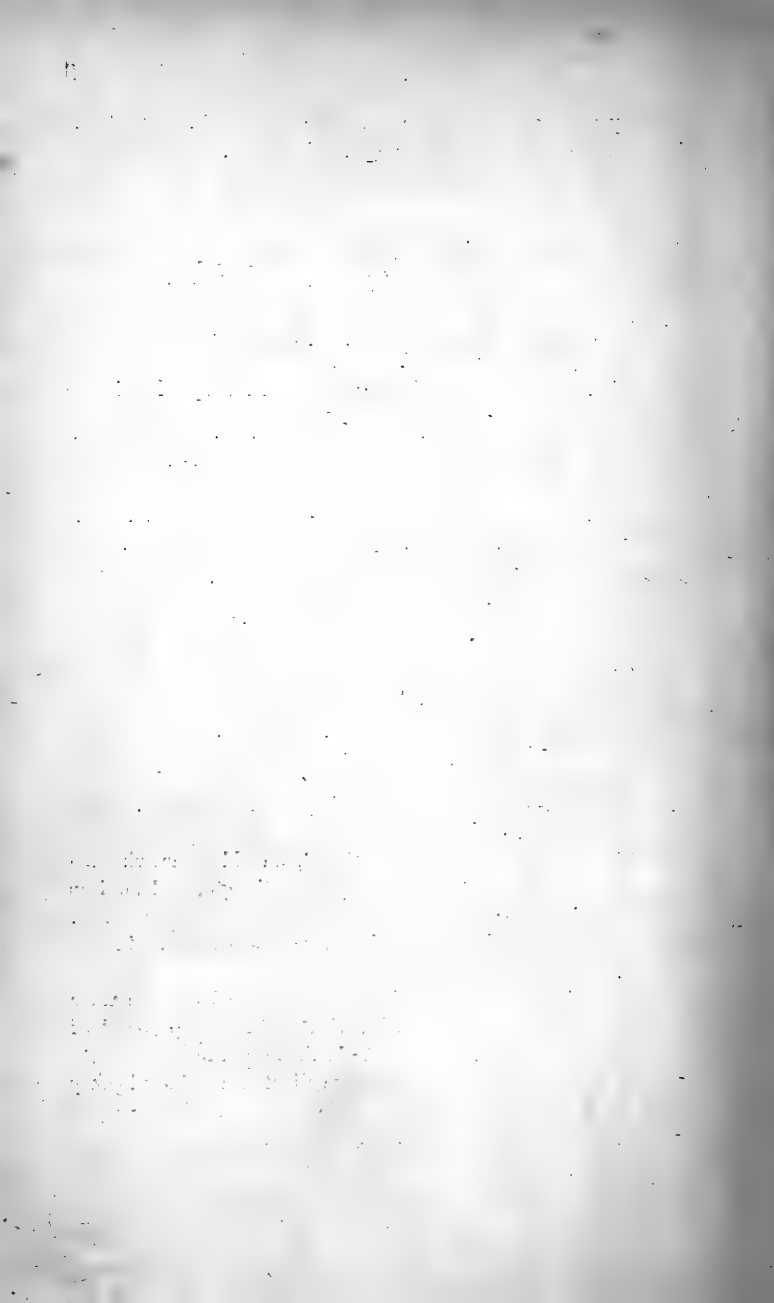
Thirty-nine present.

New Members.—Mr Carson, Newbridge, and Messrs W. Allan, J. Maxwell, and J. Roddan, Dumfries.

Exhibits.—By Mr Scott, Castle Street, an old stone whorl, a series of carboniferous fossils from Dalmellington, and an iron ladle found in the Moat of Carlaverock Castle; by Mr W. G. Gibson, some beautiful examples of gum copal with insects enclosed.

It was remitted to the Committee to prepare a list of summer field meetings, and also, to be dealt with by them, a proposal of Mr Wilson's to hold a conversazione in the autumn.

Dr T. P. Anderson Stuart then delivered an introductory lecture on "Digestion," illustrated with numerous diagrams prepared for the occasion by Mr F. W. Grierson.



DUMFRIESSHIRE & GALLOWAY
SCIENTIFIC, NATURAL HISTORY, AND
ANTIQUARIAN SOCIETY.



TRANSACTIONS.

SESSION 1882-83.

6th October, 1882.

ANNUAL MEETING.

Mr RUTHERFORD, Vice-President, in the Chair.

New Members.—Messrs J. Grierson, solicitor ; J. G. Laidlaw, Bank of Scotland ; W. Bailey, *Herald* Office ; J. Smellie, Queen's Place.

Donations.—Picked dog-fish, from Mr Birrell ; flounder having both sides dark, caught at Carsethorn, 22d Sept., from Mr James Lennox ; Vendace, together with a block of wood of supposed lake dwelling at the Castle Loch, from Mr P. Waugh, Lochmaben ; impression in wax of "Great Seal" of Queen Anne, from Mr Davidson of Summerville ; coin of James I. of Scotland ; bottle containing young cod-fish taken off Girvan, from Mr Moodie ; annual report for 1880 of Smithsonian Institution, from the Secretary of the Interior, U.S.A. ; four parts of *Annals of New York Academy of Sciences* ; two parts of *Transactions of Epping Forest and County of Essex Field Club*, from said Club ; one part *Transactions of Edinburgh Geological Society* ; three numbers of the *Field Naturalist*, from Publisher.

Exhibits.—Mr F. W. Grierson exhibited the following plants beautifully mounted and hung round the walls of the room :—*Ranunculus peltatus*—Maxwelltown Loch. *Drosera anglica*

—Lochanhead ; Lochar Moss. *D. intermedia*—Lochanhead ; Lochar Moss. *Alsine verna*—Torrheugh, Colvend. *Vicia sylvatica*—Cargen glen. *Saxifraga granulata*—Cluden banks. *S. hypnoides*—Genquhargan Craig, Tynron. *Eryngium maritimum*—Bridge bay, Borgue. *Cicuta virosa*—Castle Loch, Lochmaben. *Senecio viscosus*—Laggan Hill, Colvend. *Lobelia dortmanna*—Lochaber ; Loch Lotus. *Scrophularia aquatica*—Colvend. *Linaria minor*—Lochmaben station. *Veronica anagallis*—Maxwelltown Loch ; Banks of Cargen, &c.. *Orobanche major*—Auldgirth ; Locharbriggs. *Lycopus europæus*—Castle Loch, Lochmaben. *Calamintha acinos*—Castle-Douglas road. *Utricularia minor*—Lochar Moss, near Racks. *Samolus valerandi*—Glencaple. *Typha angustifolia*—Castle Loch, Lochmaben. *Gagea lutea*—near The Grove. *Allium vineale*—Colvend. *Iosetes lacustris*—Ironhash Loch, Colvend. *Ulmus montana*—Cargen Glen. Mr Wilson also exhibited the following:—*Nepeta cataria*—Locharbriggs. *Linaria minor*—Lochmaben. *Ornithopus perpusillus*—Locharbriggs. *Listera cordata* ; *Saxifraga hypnoides* ; *Lycopodium selago* ; *L. selagnoides* ; *Habenaria bifolia* ; *H. albida* ; *Rubus saxatilis*,—which were gathered at the Society's excursion in June. *Sedum anglicum*, *S. acre*, and *Arenaria verna*—found at July excursion. *Sagina nodosa* ; *Glaux maritima*, Glencaple. The following were gathered in the neighbourhood of Dumfries:—*Mimulus luteus* ; *Parnassia palustris* ; *Polygonum bistorta* ; *Stachys betonica* ; *Lycopus europæus* ; *Calamintha acinos* ; *Chrysosplenium alternifolium* ; *Calluna vulgaris* (white variety). Also *Utricularia vulgaris* in flower, not from this neighbourhood. Mr J. M'Meekan exhibited a number of fossils from the Carboniferous Strata of the Kirkbean coast ; also a frond of *Lastrea filix mas.*, over 6 feet in length found at Arbigland. The Chairman also exhibited a number of fossils from the Carboniferous System.

The SECRETARY submitted the following report:—We have much pleasure in reporting that the Society has increased greatly in prosperity during the past session. Thirty-one new members have joined, and six members have been taken off the roll from various causes, thus leaving the roll of membership at 137—a net increase of 25. It should be noted that nearly all the new members are resident at a distance, which prevents them attending the meetings regularly, but they are almost without exception

gentlemen who take an active interest in the objects for which the Society was instituted, and who form a valuable addition to its strength and capability for carrying out its aims. The meetings have been with one exception—the September field meeting, which did not take place—very well attended; there having been an average attendance of 22 at the winter meetings and 21 at the summer field meetings, not taking the September meeting into account. The publication of a “Flora of Dumfriesshire and Kirkcudbrightshire” marks an important advance in the work of the Society. The volume has attracted considerable notice from botanical students, and obtained favourable comments in some of the scientific periodicals. The members are under great obligations to Mr M’Andrew for the laborious work he undertook in its compilation. The arrangement with the management of the Observatory, whereby the articles belonging to the Society have been deposited in the Museum, in return for which the members enjoy certain privileges, has wrought very well during the past year, and has conferred a mutual benefit on each institution. The articles sent to the Museum since our last ordinary meeting in April are as follow:—

No. 159, April 28, Vendace from Major Bowden; No. 160, do., Albino flounder, from Mr Ballantine, Carsethorn; No. 177, June 1st, Group of Zoophytes and Sponge, Southerness; No. 178, do., Pipe fish from Mr Black; No. 179, do. Egg from inside of an ordinary domestic hen’s egg, from Mr R. Maxwell; No. 180, do., Small Drawing of Kirkcudbright Castle, from Mr Thomson; No. 184, June 21st, Tiger python, shot in Cachar by Mr Inglis, from Mr Service; No. 187, July 18th, *Sepia officinalis*, caught at Loch fishery, Gretna, from Mr Irving; No. 191, Aug. 30th, Thirty-four specimens of *Carices*; No. 193, do., Centipede from Mozambique, from Mrs Aitken, Church Crescent; No. 194, do., Adder, Mabie, from Mr Service; No. 195, do., Slow-worm caught on Millgreen, from Mr Service; No. 196, Broad nosed eel; No. 197, Sharp nosed eel; No. 198, Jar with three roach; No. 199, ditto; No. 200, Jar with one roach; No. 201, Jar with perch;—all got at Kirk Loch on the occasion of the field meeting at Lochmaben. These articles bring up the total number of specimens belonging to the Society deposited in the Observatory to 137.

We would like to direct attention to the desirability of members doing something to form a collection of our local fishes, a nucleus

The following office-bearers were then elected:—President, Dr Gilchrist, Linwood; Vice-Presidents, Sheriff Hope, Mr Rutherford of Jardington, and Mr Wilson, Inland Revenue; Treasurer, Mr W. Adamson—all unanimously.

The meeting then proceeded to the election of Secretaries, when Mr Watson moved, seconded by Mr Maxwell, that Mr R. Service be re-elected Joint Secretary. Agreed. Mr James Lennox moved, seconded by Mr F. W. Grierson, that Mr A. E. Truckell be re-elected Joint Secretary. On an amendment being proposed that Mr Truckell be elected as Assistant Secretary to Mr Service instead of Joint Secretary as heretofore, Mr Service objected, and resigned his appointment. After some discussion Mr Watson moved, seconded by Mr Chrystie, that Mr J. Wilson be elected Joint Secretary along with Mr Truckell. This was ultimately agreed to. Mr S. A. Chrystie was re-elected Assistant Secretary.

The following gentlemen were appointed Members of Committee:—Messrs W. Lennon, G. Robb, J. Watt, P. Stobie, J. Neilson, T. Watson, J. M'Meekan, and J. Lennox.

A letter from the Rev. W. Graham, Trinity, Edinburgh, was read, in which he stated that he had obtained the necessary consent to his opening up one of the inner Fosses at Lochmaben Castle, and requesting the patronage and assistance of the Society in doing so. It was agreed to comply with the request.

The meeting thereafter, on account of the lateness of the hour, agreed to adjourn till Friday evening next, when the remainder of the business would be taken up.

13th October, 1882.

ADJOURNED ANNUAL MEETING.

Dr GILCHRIST, President, in the Chair.

Thirty-three present.

A draft of the minutes of last meeting was read and corrected. A letter was read from Sheriff Hope regretting his inability to accept the office of Vice-President. On the motion of Mr Watson, seconded by Mr Wilson, it was resolved to appoint Mr M'Andrew, New-Galloway, to said office. Mr Watson read a correspondence which had passed between Mr Wilson and Mr Service as to

delivery by the latter to the former of the books, &c., belonging to the Society in his possession. Thereafter, by mutual agreement, Mr Wilson and Mr Truckell both resigned their position as Joint Secretaries. On the motion of Mr Truckell, seconded by Mr Wilson, Mr Rutherford of Jardington was elected Secretary in their stead.

Mr Wilson made a statement regarding a proposed course of Lectures in connection with the Society, and Mr Truckell read a letter he had received from Mr Reid, Bank of Scotland, on the same subject, suggesting a course of Lectures from the Combe Trust. After discussion it was resolved to remit the matter to the Committee for consideration. The Secretary was instructed to ascertain the conditions on which the Combe Lectures were delivered.

Mr Wilson moved, seconded by Mr Chrystie, that the place of meeting in future be the Free Masons' Hall, High Street. Mr Moodie moved an amendment, seconded by Mr Service, that the meetings be held as at present in the Mechanics' Institute. The motion was carried by a majority.

New Members.—Mr Wm. Dickie, *Standard Office*, and Miss Chrystie, Buccleuch Street.

Mr J. W. Kerr was re-elected Auditor.

The Secretary laid on the table a copy of the "List of Foreign Correspondents of the Smithsonian Institute, New York," which had been presented to the Society by that institution.

3rd November, 1882.—Free Masons' Hall.

Dr GILCHRIST, President, in the Chair. Twenty-seven present.

The minutes of last meeting were read, and, after some correction, approved of.

New Members.—Miss Robb, Castle Street; Miss May Robb; Dr Richardson, C. R. Institution; Mr Bruce, do.; Mr Jas. Bruce, do.; Mrs Wilson, Dumfries; Miss Muir, Linwood; Mr Robert Bruce, Wallace Street; Mr John Thomson, Irish Street; Mr Samuel Dickie, Glasgow Street; Mr T. Brown, Grammar School; and Mr A. Bennett, F.L.S., 107 High St., Croydon, as a Corresponding Member,

Exhibits.—By Mr Davidson of Summerville, a beautiful ammonite from Whitby, and a very perfect arrow-head from Knockgray, Carsphairn; by Mr Rutherford, a hornstone celt, found at Fernycleuch, Tinwald.

The Secretary called the attention of the meeting to several encouraging letters he had received from Members of the Society; amongst which was one from Mr J. J. Armistead, The Fishery, Kinharvie, with the promise of a Lecture on “Fish and Fish Hatching,” which would be given on the 19th of January next, and an invitation to the members of the Society to go down to Kinharvie and see the “Fishery” when the hatching was in process. A letter was read from Mr Bennett, F.L.S., Croydon, offering for distribution a packet of *Characeæ*, and to assist any of the members at any time in naming *Potamogeton*, *Characeæ*, and other Pond-weeds.

The Secretary further reported that he had along with the Treasurer examined the accounts for last year, and that instead of there being a balance of £2 8s 3d in favour of the Society, as reported at the Annual Meeting, the Society was at that time £8 1s 9d in debt.

The Secretary intimated that the following course of extra lectures would be given during the winter:—November—“Nature’s Tiny Workmen,” by Dr Gilchrist; December—“Atmospheric Electricity, with Experiments,” Mr Rutherford; January—“Fish and Fish Hatching,” Mr J. J. Armistead, Solway Fishery; February—“The Brain and Nervous System,” Dr Grierson, Thornhill; March—“A Cup of Tea,” Mr J. Wilson; April—“Bruce’s Castle, Lochmaben, its Past, Present, and Future,” Rev. W. Graham, Trinity, Edinburgh.

The Chairman proceeded to deliver the first part of his lecture on Corals and Corallines, entitled “Nature’s Tiny Workmen,” which was illustrated with a large number of diagrams and proved to be highly interesting.

Rare Birds.—Mr Hastings, taxidermist, read the following paper on “Rare Birds.” In looking back upon what is past of this year, I have to communicate as follows regarding rare birds that occasionally make their appearance in this district. In the early spring I received a specimen of Blacktailed Godwit, *Limosa melanura*, shot on the banks of the Nith not far from Glencaple. It is the only one I have ever had shot in this country. I have

had the skins of some shot in Egypt. It is a small-bodied bird, not much larger than a common snipe, but it has very long slender legs, adapting it for wading in little pools that abound in the marshy districts which it usually frequents. It is the only bird that has come my way which I consider worthy of special notice on account of rarity. I have a bird here, however, that has puzzled me a good deal to ascertain what it really is. I have all along called it the Manx Puffin. There is a bird known by that name, but it belongs to a different class. It is also called the Manx Shearwater, and it is a true petrel. The bird before us is described by different authors as the young of the Razorbill, *Alca Forda*, but I cannot agree with that opinion, as I have had specimens of it in the spring, in the most beautiful adult plumage, and not a trace of the Razorbill could be seen more than is to be seen in the bird before us. Sometime about the beginning of August last I received from Stranraer a young Razorbill, the skin of which I have here, and it shows at a glance what it is. Some weeks later I received from Dalbeattie a young bird of the one under consideration; and the difference betwixt it and the one from Stranraer is very marked. The latter is the true Razorbill in spring plumage. Montaigne considered the other to be a distinct species, and gave it the name of the Black-billed Auk; Bewick also mentions the Black-billed Auk as distinct, but seems to have agreed with Latham that it was the young Razorbill. Before we can arrive at that conclusion we must admit that the bill of the bird is further removed from the normal type the second or third year than it is the first year, a conclusion contrary to all analogy. I should like if the Society could be the means of throwing some fresh light on the subject.

1st December, 1882.

Mr M'ANDREW, Vice-President, in the Chair. Forty-two present.

New Members.—Messrs Calderhead, burgh surveyor; Johnston, draper; Armistead, The Fishery, Kinharvie; W. Dunbar, High Street; Dr J. Connal Wilson, Thornhill; Miss Laing, 9 Catherine Street; Miss Johnston, Catherine Street; Miss M'Naughton; Mr Tait, tweed merchant; Miss Gillies, Maxwelltown; and Mr W. Anderson, Netherwood.

It was agreed that lady members be charged no enrolment fee, and that life members be admitted on payment of £2 2s each. It was further resolved that the name of the Society shall be "Dumfriesshire and Galloway Scientific, Natural History, and Antiquarian Society," which is the title printed in Transactions No. 2.

Exhibits.—Copy of the *Edinburgh Courant*, dated 1705, and piece of polished limestone conglomerate, by Mr M'Meehan; piece of the first steam ship, large ammonite, coralline, and several other fossils, by Mr Todd.

The Characeæ, with special reference to the British species.—A paper was read, contributed by Mr A. Bennett, F.L.S., Croydon, corresponding member. The paper was illustrated with a large number of specimens, which were presented to the Society:—After noticing the little attention which has been given to this branch of Botany, Mr Bennett said—"The *Characeæ* forms an independent natural order between the *Mosses* and the *Algæ*. In 1880, the Messrs Groves published in the *Journal of Botany* their admirable review of the British *Characeæ*, with four plates containing figures of all the then known species. At the end of that year he found that some Cornish specimens belonged to *Chara baltica*, and in September of that year he was fortunate enough to discover in Norfolk *C. stelligeria*. In 1881 Mr H. Groves found *C. contraria* in Wichen Fen, Cambridgeshire; soon afterwards Mr Bennett found in Norfolk *C. tomentosa*, and alongside of it *C. stelligeria*, the former being an addition to the British flora, but known in Ireland since 1847. There are still several continental species that may be found, especially in Scotland. The Scandinavian flora is very rich in these plants, especially that of the southern provinces; and these being mainly in the same latitude as Scotland, it is not unreasonable to expect additions to our lists. With regard to their distribution outside our country, they are found from the hot springs of Iceland to the tropics, high up in the Andes of South America to the Lakes of British North America, but principally in the temperate zones. The genera included in the order are *Chara* Lychnothamnus, *Tolypella*, and *Nitella*. The known species are about 140; of these we have 12 species of *Chara*, 1 of *Lychnothamnus*, 3 of *Tolypella*, and 7 of *Nitella*." Mr Bennett concluded his very valuable paper by intimating that if any of the members would take up

the study he would gladly help in any way in the naming or communicating of specimens, references to books, &c. A very neat diagram illustrating each genus accompanied the paper. The following is the list of British *Characeæ* sent by Mr Bennett :—

- Chara fragilis*, Desv.—Common.
 „ *fragifera*, Durien.—Rare ; Cornwall.
 „ *connivens*, Salz.—Very rare ; Hants, Devon.
 „ *aspera*, Willd.—Rather rare.
 „ *tomentosa*, Luin.—Rare ; Norfolk ; Ireland.
 „ *polyacantha*, Braun.—Rare ; Fife.
 „ *hispida*, Luin.—Fairly common.
 „ *rudis*, Braun.—Rare ; Fife.
 „ *vulgaris*, Luin.—Common.
 „ *crassicaulis*, Kütz.—Rare.
 „ *crinita*, Wallr.—Very rare ; Cornwall ; Dorset.
 „ *delicatula*, Braun.—Rare ; Aberdeen.
Lychnothamnus alopecuroides, Delile.—Isle of Wight.
Tolypella glomerata, Leonhardi.—Rather rare.
 „ *prolifera*, „ .—Very rare ; Sussex ; Dublin.
 „ *intricata*, „ .—Rare.
Nitella tenuissima, Kütz.—Rare ; Cambridge ; Wales ; Norfolk.
 „ *gracilis*, Smith.—Rare ; Sussex ; Dublin.
 „ *mucronata*, Kütz.—Rare ; Sussex ; Bedford.
 „ *translucens*, Kütz.—Rare ; Perth.
 „ *flexilis*, Ag.—Rare ; S. of England.
 „ „ var. *crassior*.—Very rare ; Perth only.
 „ *opaca*, Ag.—Common.

LATELY ADDED—

- Chara stelligera*, Bauer.—Norfolk only ; 1880.
 „ *baltica*, Fries.—Cornwall ; 1880.
 „ *contraria*, Braun.—Rare ; Fife.

With many varieties and forms.

The Chairman read a paper of his own on “The Parmeliæ of the Stewartry,” illustrated with about 30 specimens (which Mr M'Andrew presented to the Society).

Place Names of Nithsdale.—Mr Shaw, Tynron, read a paper on this subject, of which the following are the principal divisions :—(1.) The various sources indicated from which we should endeavour to collect our slowly waning place-names. (2.) Necessity

of getting hold of the *oldest* spelling or sound, and instances given of changes of pronunciation, obscuring or obliterating the meaning of place-names, in Tynron and adjacent localities. (3.) An attempt to show that *Tynron*, formerly *Tindrim*, means "the hill or ridge in which the sacred fire was lighted" by the Celts of old. Afterwards, from thirty to forty place-names, nearly all of Celtic origin, are given, with the meaning assigned, according to Joyce, Blackie, and other recent writers on the subject. To collect the place-names of a county is a task (says Mr Shaw) somewhat like that of giving an account of its Flora, and would be best achieved by each member taking up the area with which he is best acquainted. Not only should books, but title-deeds, session records, old grave-stones, and old inhabitants be pressed into service. In a research of this kind the oldest-spelling or sound of the word should be considered the most valuable, as phonetic decay, like much handling of a coin, is very apt to obliterate the characteristics of the original. I recollect the farm and wood adjacent to my birth-place were respectively named *Rawflesh* and *Racewood*, and it was not until perusal of the old title-deeds that *Rawflesh* was discovered to be a corruption of *Roughlees*, and that the *Racewood* meant the park or wood in which roes had been accustomed to herd. The first case is that of a word drifting away from its original sound by attempts to pronounce it more easily, the second shows how an old pronunciation tends to become unintelligible from the Queen's English usurping the place of the vernacular. Since such changes are wrought in English words by an English-speaking people, greater changes are the rule when an alien race, speaking a different language, succeeds an aboriginal in possession of a country, and retains for convenience the place-names that had been given by the displaced race. It is not easy to observe at first glance that *Countam*, on the borders of Tynron and Penpont, means "the head of the hill," and contains, in its first syllable, the same word as *Can* in *Cantyre*, the headland, and in its second *Tom*, the knoll, *Tomachuriach*, the knoll shaped like a boat (*curagh*), near Inverness. It would be vain, unless we knew its more ancient spelling, to attempt to extract the true meaning from *Craigmay* in the Stewartry, since it appears in the earlier records as *Craigbeath*, which we at once recognise, as "the craig or hill of the birch trees." The loss of the meaning of a place-name gives rise to tautology. In Tynron it was forgotten that *Torr* meant "a

conical hill," so a new generation called it *Torrbræ*, and as if that were not enough, in order better to describe its shape, another generation added the word *head*; so we have *Torrbræhead*, which is very like hill, hill, hill. In Tynron we have the *Clone*, or "meadow beside the moss;" it is a name common to Gaelic, Manx, and Erse; thus *Clones* in Monaghan, *Clonard* in Meath, and it appears elsewhere as *Cluny*, *Clunes*, *Clones*. It elsewhere appears in Tynron as *Clonerea*, "the smooth, fertile meadow by the marsh." Carlyle, in his "Reminiscences," probably forgetting partially, calls this *Clone* of ours "the *Clove*, or cleft place between the hills," as he goes on to explain, and thus our old fine Gadhelic word runs a risk of being made a Saxon one, and all on the authority of a man of genius, whose ear, perhaps, was waxed up with cold when he first heard the place-name uttered. *Tynron*—In the old session records it is written *Tinnerin* and *Tindrim*. The last word connects it with *Tyndrum*, Perthshire. *Tan* is the Celtic for *fire*. We have it still in the Scotch word *Tawnle*, which, according to Jamieson, meant originally "a large fire, kindled at night, about the time of Beltane." *Drum* is a long-backed ridge. There is another word in Tynron beginning with the same syllable, *Tinleago* or *Tinlaght*. There is also a high hill, *Cormilligan Bale*. With these facts before us we are warranted in saying that *Tynron* originally meant, to the Celt, a "beacon hill" or "ridge on which was kindled the sacred fires." We meet with *tan*, fire, softened into *tin* in place-names, as *Ardentinnny*, *Craigentinnny*, and *Tinto*, and all these very well could be hills on which sacred fires were kindled. We now proceed to give some of the Tynron place-names, which, it will be seen, are mostly Celtic. *Maolwhinny*, the broad smooth hill. *Lamgarroch*, the rough land. *Croglin*, Joyce says *Crug*, a rick, a heap, a stack. *Lan*, *Linny*, a granary. *Marshmalloch*, the marsh in the upland. *Penzeree*, the smooth hill. *Knockenboy*, the yellow hill. *Snab*, the projecting point. *Mounthooly*, perhaps from *main tulloch*, the little hill. *Cormilligan*, little round hills (Joyce, 1st series); very descriptive. *Craigencoön*, the curved or winding stone (Joyce, 2d series). *Bennan*, the diminutive of *Ben*, a mountain. *Strathmilligan*, the glen of the little round hills. *Corrièdoo*, the dark glen. *Kilmark*, boundary kirk (Blackie). *Kirkconnel*, church of St Connel (Blackie). *Laght* or *Leaght*, sepulchral monument (Joyce). *Clod-roch* (*Clone-darroch*), the meadow of the oak trees. *Dalmakerran*

(*Dal-maol-Kiarin*), the bald or barren field of St Kiarin. It can be shown that the word *Dailly*, an Ayrshire parish, is ground down from the same original. (*Vide* Blackie.) *Auchengibbert*, Gilbert's field. *Auchenbrack*, the spotted field. *Auchenhessnane* (*ess*, waterfall; *essan*, the diminutive), the field of little waterfalls (Blackie). *Knockelly*, *Knock*, *Keelagh* (?) the narrow hill (Joyce, 2d series). *Corfardine*, *Cor* means a round hill. *Clack-whanam*, the stone amid the whins. *Denery*, *Den* or *Dene* is a Saxon word meaning *wooded valley*. *Aird*, a high place. *Torbraehead*, a conical hill. It was forgotten that *Tor* meant a hill, and then Sax. *brae* was added, and again to emphasize it was added *head*; literally hill, hill, hill. *Camling*, the crooked linn; the farm being named from the linn, a striking feature. *Glenmarlin*, Merlin's glen, from the wonderful linn. *Doon* or *Dun*, was the name given to a fortified hill by the Celts. Traces of a fort are yet visible on Tynron Doon. *Cormilligan Bale*, the hill among the little smooth ones on which the bale fire or sacred fire was lighted. *Appin*, the high land. *Lann*, the enclosed ground. *Clonerea*, the smooth meadow, with water on one side, and marsh on the other (Blackie).

The Deil's Dyke West of the Dee.—Mr Brown, Drumsleet, read a paper on this subject. He said there are two dykes bearing this name in Galloway. The first runs from the mouth of the Cree to Dee's junction with the Tarff. It is very distinct from the second in locality, and it exhibits a base uniformly six feet, and having the fosse invariably on the south side. It is scarcely anywhere more than three miles from the sea, which is much in view; and the ruins are clearly of later date. I should set them down to the date of Norseman occupation. The second dyke is the direct topic of this paper, and the most that can be said of the old wall is that portions of it are still visible, and its course can still be traced, but it is very clear, from Train's account, that the course of time has made it much less distinct than he found it. It is well known to be very tortuous in its course, and difficult to follow, especially where it goes over soft land. In such a place it is lost, and its next ground must be literally searched out anxiously. The stones have in most places been completely carried away; in one place the *debris* was left, in another the foundation stones were as they had been first placed, and so continued for half a mile. This was a good trace. In a moss the

rampart was built of wooden piles found several feet below the surface. It stops at the edge of a loch, and begins again on the opposite side. But the course is very whimsical; there is no principle or apparent reason why it takes a particular lead. It may have been once manifest, not now. The width of the base is always eight feet, and the fosse is always on the north side. From Lochryan, where it begins, to the last trace near the Bridge over the Deuch, the fosse is present—on the north; where stones were scarce an earthen rampart was made, and strange to say that remains in as good a state of preservation as the stone, if away from arable land. The Deil's Dyke may be regarded as a contemporaneous continuation of the defensive wall of Severus, built 208-211 A.D. to stop the incursions of the Caledonians, or Northern Picts. The Deil's Dyke was a defence of the Southern or Galloway Picts who were nearly Romanised, as being, in Caledonia, longest in contact with them, viz., from 79 A.D. to 211 A.D., or from Agricola to Severus's time.

5th January, 1883.—Conversazione.

The fourth monthly meeting of the session was held as a conversazione to-day in Greyfriars' Hall, when a large collection of objects of interest, illustrating Archæology and the different branches of Natural Science, was exhibited. The exhibition was opened at 2 P.M. by Provost Lennox, who addressed the meeting on the objects and work of the Society. After a short interval the Hall was again opened at 7 o'clock, Dr Gilchrist presiding. The Secretary read the minutes of last meeting, which were approved of. The President then addressed the meeting on the "Aims and Claims of the Society," after which the following ladies and gentlemen were elected members:—Provost Lennox; Mr S. M. Brown; Rev. J. D. M'Kinnon; Rev. J. Cooper; Dr A. Davidson, Thornhill; Mr Fingland, Thornhill; Miss Aitken, Dumfries; Miss M. Aitken; Mr W. J. Laurie; Mr Armstrong, architect; Rev. G. W. Tooley; Mrs Tooley; Mons. M. De Prackie; and Mr J. Sloan of Barbeth. The Secretary announced the following donations:—Petrified palm; shark's tooth; gun flint from the Tower of London; nodule of flint enclosing echinus; and several specimens of Whitby jet from Major Bowden. In the course of the evening Mr J. Gibson Starke addressed the meeting

on "Archæology, Its Width and Importance." Dr Grierson followed with some very suitable remarks on "The Study of Nature and Its Advantages." The Hall was crowded with visitors during the evening. At the close of the meeting votes of thanks were passed to Provost Lennox and the other speakers, to the Contributors to the exhibition, and to the Sub-Committee appointed to carry out the arrangements.

The Size of the Old Bridge of Dumfries.—Mr M'Dowall read a paper on the above subject at the intermediate meeting on the 19th January. The Old Bridge, as you have all heard, was built by the bountiful Devorgilla; and as she died on the 29th of September, 1289, it must have raised its head above the waters of the Nith some time prior to that date. We may safely conclude that about the year 1283, precisely six centuries ago, the fabric assumed a completed form. A considerable number of years since I applied to the experienced antiquary, Mr Cosmo Innes, to see if he could oblige me with any reliable information as to the circumstances under which the Bridge had been constructed: his answer was brief and disappointing, to the effect that if the Bridge was so old as the date I had assigned to it, it must have been made of timber, since in the thirteenth century there were no workmen in Scotland capable of bridging a broad tidal river like the Nith with stone. Mr Innes wrote in seeming ignorance of the fact that the Lady Devorgilla had at a vast expense brought foreign architects and masons to this district for other purposes, and that the skill and craft which created the magnificent Abbey of Sweetheart (also founded by Devorgilla) would be amply adequate to link together, by means of a permanent stone erection, the sister shires of Dumfries and Galloway. It would, doubtless, be a work of considerable difficulty. The architect would, of course, have to take into account the nature of the shores on each side—high on the west, low on the east, and the tendency of the river when swelled by spate or tide to invade the houses of the Vennel, which had already sprung into existence. If reasonable provision could be made for this latter contingency, by giving six arches to the left or Dumfries side, against three to the other side, we may feel assured that money and time would not be wasted in building a single additional arch; and my decided opinion is that all the exigences of the case would be fully met by a nine-arched bridge. That the Bridge actually erected had never more than nine I shall endeavour to

show. Not having been able to get information on the subject from printed books or living authorities, I consulted the Dumfries record-room ; and from writs there kept I learned that Devorgilla's Bridge consisted of nine arches in 1681 ; and I think you will all agree with me that if it had only that number then, it would not be likely to have many more at the date of its erection. But if we are to credit a traveller who passed along the Bridge forty-two years after 1681, the arches had swelled in the interval from nine to not—ten, or eleven, or twelve—but to the baker's dozen of thirteen ! a growth that seems to me as surprising and incredible as that of Falstaff's men in buckram. Mr Pemberton in his "Journey through Scotland," of date 1723, says : "I passed the river Nith from Galloway to Dumfries over a fair stone bridge of thirteen large arches, the finest I saw in Britain next to London and Rochester." That extraordinary statement found its way into a local publication in 1832, and down till a comparatively recent period was accepted without challenge. But it wears the impress of fable on its very face : it is not only unsupported by a single particle of evidence, but runs counter to conclusive testimony which persistently restricts the arches to nine. Sometimes we are told—

" Travellers in pathless downs
Plant elephants instead of towns ;"

and in this instance, I think, the traveller, trusting to a treacherous memory instead of written notes, has been beguiled. I fancied that I had many years ago demolished this thirteen-arch theory, but it has sprung up again during the last fortnight, the occasion of its revival being a copperplate engraving of the Old Bridge shewn at our conversazione on the 5th instant, in which the venerable fabric appears dowered with ten arches ; and it has been argued, if ten, why not more than ten ; and may not Pemberton be right after all, and those who doubt his declaration be wrong. The date of this picture is not given ; but it has evidently been drawn about the period when Burns resided in Dumfries, and as the name R. Riddell appears upon it as the artist, it may possibly owe its origin to the Poet's good friend, the laird of Friars' Carse. But the picture, though a tolerably good one for an amateur, is sadly at fault as regards proportion : it has obvious defects, negative and positive, and I venture to class among the latter the amplification of the nine arches to ten. The artist, whoever he was,

must have taken his view-point at a considerable distance on the Dumfries side, from which the precise number of arches would not be seen very distinctly; and, not believing, like Rory o' More, that there's luck in odd numbers, he has given the even figures of ten to his picture of the Bridge. However this may be, I produce another picture taken about thirty or forty years before, which, I think, gives the Bridge its due allowance of arches, neither more nor less. When I state that the engraving now under notice is by Francis Grose, the distinguished antiquarian author and artist (at whose instance, as you all know, his admiring friend Burns wrote *Tam o' Shanter*), you will admit, I think, that when he limits the arches to nine, any evidence to the contrary, deduced from an anonymous engraving, is completely neutralised. But to put the matter beyond all reasonable doubt Grose measured the Bridge so as to ascertain its size as a whole, and in detail, with this result: "Dumfries Bridge (he says) is of stone, and consists of nine arches: its measures are four hundred feet in length; breadth within the parapets thirteen feet six inches; mean width, the parapets included, sixteen feet two inches; height from the top of the parapet to the water, twenty-six feet." Grose adds, with reference to the picture, "This view was drawn A.D. 1747." Another author who traversed the district about the same period published "*A Tour thro' the whole Island of Great Britain*;" and in the sixth edition of his work, dated 1761, he says at page 115, "Dumfries was always a good town, with large streets. . . . Over the river Nith is a very fine stone bridge at this place, with nine arches"; this author concurring with Grose to confute alike the Baron-Munchausen-story told by Pemberton thirty years or so before, and the less unreasonable but equally unreliable pictorial sketch supplied by Mr Riddell. It has been conjectured by some that even though the Bridge may not have had more than six arches to the east of its key-stone or port, it may have had one, two, or three more extending into the base of Corbally Hill, Maxwelltown; but as I have already said, the high bank on the west side rendered the further extension of the Bridge in that direction unnecessary. I know that so far back as 1660 the Bridge on the Maxwelltown bank was just as it now appears (except any little change caused by wear and tear), and also as it is depicted both by Captain Grose and Mr Riddell. You will see from the two engravings that there is a two-storey tenement lean-

ing upon the end of the Bridge. That ancient house is still to the fore ; and I am inclined to think that it has outlived all its contemporary erections, and is the oldest domicile in the sister burgh. The date of its precept chapter, as granted by the Dumfries Council to the owner of the house, James Birkmyre, cooper, is 1660 ; the property being described as “ that new house builded upon the far end of the Bridge on the south side.” This interesting document is in the hands of Mr J. H. M’Gowan, solicitor, Dumfries. Mr M’Dowall closed his argument by announcing the result of an excavation made at his instance some years ago at the spot in the Vennel where the pier of the tenth arch must have been put down, if any tenth arch had ever been in existence. The operation, he said, was carefully performed under the direction of an experienced local surveyor, Mr Barbour, who, taking Grose’s dimensions of the nine-arch bridge—four hundred feet—added the length of an additional arch, and caused the spot and all around it for a long way to be excavated six feet deep, and probed to a still further depth, without finding a trace of anything resembling the heavy masonic pile of which the other piers consist. The conclusion come to was, that there never had been a tenth pier ; and the inference seems unavoidable that the Bridge never numbered more than nine arches. This experiment, coupled with other testimony already adduced, convinced him that the foundation of the other four arches had been laid in the realms of fancy, and not in the solid earth or shifting sands of the Vennel.

The Chairman, in name of the meeting, awarded to Mr M’Dowall cordial thanks for his valuable paper, and for the research which he had undertaken to settle an interesting local question.

2d February, 1883.—Free Masons’ Hall.

Mr WILSON, Vice-President, in the Chair.

New Members.—Miss Burnett ; Mr W. Tweddle ; Mr Joseph Elder ; Mr D. Fenton ; Miss Murray ; Messrs John Milligan ; James Adams ; F. Gilruth ; R. Maxwell ; and John Symons.

Donations.—Fifteenth Annual Report of the Trustees of the Peabody Museum of American Archæology and Ethnology, 1882 ; Annals of the New York Academy of Sciences, Nos. 7, 8, and 9, 1881 ; Lists of Duplicates and Deficiencies of the New York

Academy of Sciences, 1880-1881 ; Nos. 2, 3, 4, and 5 of the Transactions of the New York Academy of Sciences, Vol. i., Session 1881-1882 ; Copy of Transactions of the Perthshire Society of Natural Science, 1882.

Exhibits.—A Cormorant, by Mr Rutherford, shot by him at Jardington ; Three Copies of the Psalter, dated 1580, 1623, and 1642, by Miss Gregan ; Eleven splendid cases of Beetles shewn and described by Dr Sharpe.

The Old Land Taxes.—A paper was read by Mr M'Dowall on "Old Land Taxes of Scotland, with special reference to the old Kirkcudbrightshire Valuation Roll of 1682." He gave a brief sketch of the condition of this country in early pre-historic times, when it was occupied only by wandering tribes who had little idea of the value of property in land. At that primitive period the wandering tribes had scarcely any more connection with the soil than with the air which they breathed or the water which they drank. A field of grass, as Lord Kames says, might be looked upon as belonging to a horde or clan while they really occupied it, but so soon as they struck their tents for pastures new they had no longer any claim to the deserted field. He then proceeded to notice how in course of years this state of matters underwent a thorough change. When William Duke of Normandy conquered England, the entire soil of South Britain lay at his disposal. Reserving the lion's share for himself, he rewarded his chiefs with large estates, and eventually what is called the feudal system was set up by him, according to which he was recognised as landlord-general over the whole kingdom, and his princes and other nobles as Crown vassals, who, in virtue of the estates assigned to them, were bound to render him military service, and eventually also to bear a large proportion of the general expenses of the government. A hundred years at least before Scotland had had any experience of a land-tax the barons and the yeomen of England had grown familiar with the impost, which amounted in their case at one time to about one-half of the whole national revenue. This very simple mode of making the land support the State was seriously interfered with by a practice introduced by Richard I. of selling out to the great barons the estates that they had hitherto held as tenants in name of the nation from the king. Thus it came to pass that the burdens on land were lightened and taxation of another kind had to be resorted to, falling chiefly on

trade and commerce, with which the treasury was replenished. But no king of Scotland ever stood in the same relationship to its soil as Norman William did to that of England. Had Edward I. subdued North Britain, he might have divided the land among his followers and placed Scotland on the same footing as England in regard to the feudal system. As, however, the Scottish soil never became the property by conquest of any foreign prince, and was never more than nominally the property of its own kings, the revenue it yielded to the Crown was precarious, and generally speaking small as compared with the land revenue of England. Towards the close of the eleventh century a modified feudalism had taken fast hold of this northern kingdom. By a fiction of law the ownership of the soil was vested in the sovereign; but the fact cannot be disguised that some of the old territorial families claimed to be absolute proprietors of their estates, and asserted they had as good a right to them as the king had to his own crown lands or to his regal sceptre. You remember what some mutinous Scotch barons said to the king when on one occasion he asked to see the title-deeds of their estates. In answer they drew their swords and boldly told his majesty that by these weapons they had won their lands and meant to keep them. These words were no idle boast; and while many of the smaller landowners and the vassals who *bona fide* held their estates from the king yielded him loyal service and tribute, not a few of the more powerful lords paid but scanty homage and scrimper sums of money to the Crown. In this way the feudal system, so far as taxation is concerned, was never anything like so successful on the north side as it was on the south side of the Tweed. Mr M'Dowall went on to show how the Douglasses held such an autocratic rule over Galloway and part of Dumfriesshire that the land impost levied by the government yielded little or nothing in these parts of Scotland for a long period. Speaking about the origins of the land tax he said: By law and custom the king was empowered to levy special taxes on three different occasions whenever they arose—one on his eldest son being knighted, another when his eldest daughter got married, and a third to ransom himself in case of being made prisoner, an unfortunate casualty that befell no fewer than three of our kings during the Middle Ages. To William the Lion we in Dumfries are indebted for having raised the town to the rank of a royal burgh about the year 1190. Sixteen years prior to that date he

experienced a disaster to which the whole of Scotland was indebted indirectly for a tax upon land, the first regarding which we have any knowledge. Crossing the Border with an invading host he was defeated by the English at Alnwick, and cast into a prison with no chance of getting out of it in a hurry unless by submitting to the outrageous demands made upon him by his royal jailer, Henry II. In an evil hour the kingly captive sold the liberty of his country in order to purchase his own personal freedom, the English Shylock exacting from him a goodly sum besides; though Hector Boece probably exaggerates the amount when he says that it was nothing short of a hundred thousand merks (a merk being 13s 4d.) Thus was laid the foundation of that claim to a suzerainty over Scotland, which, even after it had been redeemed, various English monarchs endeavoured to enforce. On the 25th of December, 1190, the two sovereigns whose surnames were both derived from the monarch of the forest, William the Lion and Richard the Lion-hearted, met by tryst in York city and signed a treaty of no ordinary interest, inasmuch as the English sovereign, for himself and successors, thereby renounced the claim conceded to his father Henry, thus rendering the Scottish realm free from it for ever, and restoring its national independence, on its sovereign, William, engaging to pay Richard ten thousand merks sterling, a sum which he needed much to cover the cost of his crusading expedition to the Holy Land. The claim was nevertheless basely revived by Edward I., and again bought off, but not by gold or silver, but by treasures greater far—blood drained from the dearest veins of a heroic people. Two other instances of the captivity of the Scotch kings were adduced to show that in their case also ransoms had to be paid, to defray which taxes on land had to be imposed, and thus, what was at first looked upon as a temporary impost, like our own income-tax, and one only to be resorted to on special occasions, became permanently established, and yielded a regular revenue towards the general expenses of the State. Glancing for a moment at the condition of the soil, on which these burdens were cast, Mr M'Dowall said that the prevalence of war during the middle ages arrested the progress of the plough and circumscribed the sweep of the sickle. In the golden days of Alexander III. a sufficient amount of land was cultivated to supply the national consumpt of oats, barley, and bread-stuffs, and in some few districts, naturally fertile, wheat wa^s

grown. Afterwards agriculture retrograded, and commerce, which had also made extensive strides, experienced a disastrous check. In the fourteenth century and onward a greatly improved state of affairs became visible. Land increased in productive power, and was all the better able to bear the burdens cast upon it; the royal burghs, to which special privileges had been given by William the Lion, grew in size and yielded a goodly *quid pro quo* to the royal treasury, in the form of taxes paid for special purposes, and a perpetual impost termed the Great Custom, which was levied by means of the king's own customarii on all staple commodities of foreign trade. At a period when landowners followed the chase more than practical farming—during the precarious intervals of peace—the monastic fraternities rendered patriotic service in the subjugation of the soil. Mr M'Dowall then gave a series of illustrations shewing the value of land in the Stewartry two hundred years ago, and its principal owners, as drawn from a rare old volume (belonging to Mr R. K. Walker, town clerk, Maxwelltown) to which he had access recently—the Valuation Book of the Stewartry of Kirkcudbright for 1682. He explained that in that year the county was still in the throes of a fierce religious persecution, and that therefore the valuation put upon the different estates in the Stewartry might be less than usual on that account, as, when the people were resisting to the death the attempts made to force Prelacy upon them, they had no inducement to till the soil. When, therefore, we read in the roll of ten-acre farms yielding no more than sixty shillings Scots a year, it would be safe, perhaps, to add a fifteenth at least to represent fairly their nominal value. As the figures stand they show a grand total of £10,250 representing the annual rental of the land of Kirkcudbrightshire; and if we add say £1750 for house rents, only some of which are included in the returns, the amount is brought up to £12,000, which is only about a thirty-third of the yearly value of the Stewartry at the present day, exclusive of its railways and royal burghs. The lecturer had drawn up notices of some of the parishes, only a few of which, however, he read, as the time allotted to him had been already nearly all occupied. We give the form of the reference to Terregles as a specimen of the style of this part of the paper: Since the period, early in the twelfth century, when Sir John de Maccuswell acquired the barony of Carlaverock, the family which he founded paid immense sums to the Crown in

the shape of land tax and other tributes, and the aggregate would have been much larger had they not on repeated occasions impoverished themselves by their self-sacrificing loyalty to the royal house of Stuart. Their devoted adhesion to the cause of Charles I., the generous assistance given by them to that monarch's heir when he made a futile attempt to recover his ancestral throne, are facts which all must be familiar with. Eugene de Maccuswell by marrying the daughter of Roland, Lord of Galloway, acquired many broad acres in Kirkcudbrightshire, and his representative there during the first Jacobite rebellion lost them all, and nearly his life also, for the share he took in that enterprise, at once so bold, romantic, and forlorn. Lord Nithsdale, doomed to the scaffold, eluded his jailers through the ingenious strategy of his devoted wife and died in exile. It was gratifying to add that the forfeited estates were eventually bought back by his family for a wonderfully small sum—£803 sterling, being taken as the yearly rental on the testimony of a surveyor appointed by the Government, which amount was made up chiefly in money, some of the tenants paying their rent in such small items as bolls of barley, hens at tenpence a pair, and peats at a penny per dozen loads. Thirty years prior to the rebellion of 1715, the family, as represented by Lord Herries, possessed nearly the whole of Terregles. In 1819 when the parish was valued at no more than £2021 Scots, they drew a rental from it of £1457; and at present, when the valuation has risen to £6847 sterling, they, represented by Captain Maxwell, draw a proportionate income from the parish. The ancient roll shows the names of nearly all the farmers and tenants who tilled the soil of Terregles in 1682, together with the value of their holdings. Not a few of them seem to have been "paur tenant bodies," not over-plentiful of cash. Lord Herries kept Terregles Mains in his own hands, the value in the victuals it yielded to him being set down at £5 7s Scots per annum. Then, as now, the brook of Cairn "wimpl't through the glen," and after "cooking underneath the brae, below the spreading hazel," drove a couple of mills which ground the grain from which "bannocks of bere meal and bannocks of barley" were baked for the tables of the noble lord and his tenants. Glen Mill and New Mill, we are told, were worth to him twenty-one bolls of meal, value £101 10s yearly; but it was to be regretted that the name of the jolly miller, who then lived

by the water of the Cairn, is not recorded. Then, as now, dainty red fish were caught in the College pool, their annual value being given at £80 Scots, while the same fishings bring at present £20 sterling. Barnhill, now an excellent farm, yielded only £40 Scots, and after a lapse of two centuries it brings to its laird no less than £240 sterling. The farm of Terregles Town, now a capital piece of land, was let to David Welsh and Andrew Wight in 1682, they paying for it £40 Scots between them. It now yields £718 sterling; the advance in this latter instance being about the greatest that Mr M'Dowall had met with in the course of his inquiries.

Some Points of Interest in the Natural History of Islands.—An important paper on the above subject was read by Dr Sharpe, Eccles House. In it a brief epitome was given of the present state of knowledge as regards the natural history of islands. The natural history of St. Paul's Rocks on the equator, midway between Africa and America, was first sketched; then that of the Galapagos Islands, 600 miles from the South American coast; and afterwards that of the Sandwich Islands,—the most remote from other lands of all islands of any unusual size—was dwelt on at considerable length. The means by which these islands had acquired the animals and plants found in them were discussed. It was pointed out that, although all the islands of the world had a large number of animal and vegetable inhabitants similar to those found elsewhere, they had also a very large number of peculiar forms, some of which were very strange, and like nothing existing elsewhere so far as known. It was considered by the writer that the supposition that these facts might be accounted for by changes having taken place in the distribution of sea and land, so that the islands might formerly have been parts of continents or near to them, was not satisfactory; and it was concluded that though a great number of the plants and animals that are the same as those found elsewhere had been introduced by natural agencies, such as winds and floating timber, yet this did not explain the existence there of very peculiar animals; and these suggested that it was possible that in the past there had been more than one geographical centre of the origination of life. The paper ended with a forcible appeal for obtaining knowledge of these facts, which ultimately will prove of great importance. But meanwhile these curious creatures are being rapidly more or less completely exter-

minated, and there are no doubt many that we do not yet know that still exist but will soon cease to do so; and in many cases we know that it is already too late, and that the wonderful inhabitants of islands have been completely exterminated, all that we know about them being that they formerly existed. Mr Wallace's proposal for the appointment of resident naturalists, at a small expense in remote islands, was alluded to with approval.

2d March, 1883.

Dr GILCHRIST, President, in the Chair. Forty present.

New Members.—Mr Oughton, confectioner, Castle Street; and Miss Gilroy, Moat House.

Donations.—The Annual Report of the Bureau of Ethnology, Washington, 1879-1880, and 12 old coins, the latter presented by Mr Smith, Albany Place.

Exhibits.—By the Chairman: several rocks and fossils from Egypt; and a piece of silicious slate, found in an Egyptian Temple, and supposed to have been used as a charm. By Mr Watson: a sword, picked up on the Battlefield of Tel-el-Kebir; a proclamation in Arabic, found in Arabi's tent at Tel-el-Kebir; a copy of the Turkish journal "*El-Jawaib*," got in the palace on the day that the British troops entered Cairo.

Rev. J. Fraser, Colvend, read an interesting paper on "Alpine Botany, with special reference to the Flora of Zermatt."

Mr M'Meekan read a curious paper, entitled "Quaint Epitaphs in the District."

The Study of Mosses.—The Chairman read a very valuable paper contributed by Mr P. Gray, London, on "Introduction to the Study of Mosses, illustrated with specimens." After noticing the divisions of the order and their characteristics, the fructification, mode of reproduction, and the special peculiarities of the different genera, which were each treated at some length; and having given instructions for collecting and preserving, Mr Gray concluded his admirably clear and interesting paper with the following remarks:—"I may here be allowed to remind you that it is impossible to teach any branch of natural history by papers or books. All that one can hope to do by bringing a new subject before an audience in this way is to excite to personal investiga-

tion. The fields must ever be the naturalist's study, and nature his book, and that itself constitutes one and not the least of the advantages of the pursuit—the combination of physical and intellectual exertion, and the pure air in which most of it is carried on, being one of the most effectual ways of attaining that highest of human existence, which consists in the possession of a sound mind in a healthy body."

SPECIAL MEETING.

30th March, 1883.

Dr GILCHRIST, President, in the Chair. Twenty-one present.

A special meeting of the Society was held to-night for the purpose of considering the alterations which the Dumfries Town Council propose making on the Old Bridge.

The Chairman explained the purpose of the meeting, and made some remarks against the proposed changes.

The Secretary read letters on the subject from Mr Dudgeon of Cargen; Sheriff Hope; Mr J. Gibson Starke of Troqueer Holm; and Mr Brown, Grammar School—all disapproving of any alterations or repairs which would in any way change the outlines or the form of the present structure. After some remarks from Mr Barbour, architect, Mr M'Dowall, the Chairman, Mr Rutherford, Mr Wilson, Mr Sloan of Barbeth, Mr Broun, solicitor, Messrs Grierson of Chapelmount, M'Meekan, Watson, and Chrystie, it was unanimously resolved, That Messrs Barbour and M'Dowall prepare a petition against the proposed alterations, and that the said petition be presented to the next meeting of the Town Council by a deputation consisting of the Chairman, Mr Barbour, Mr M'Dowall, and the Secretary.

A vote of thanks was awarded Mr Barbour for the active part he had taken in the matter.

6th April, 1883.

Dr GILCHRIST, President, in the Chair. Forty-three present.

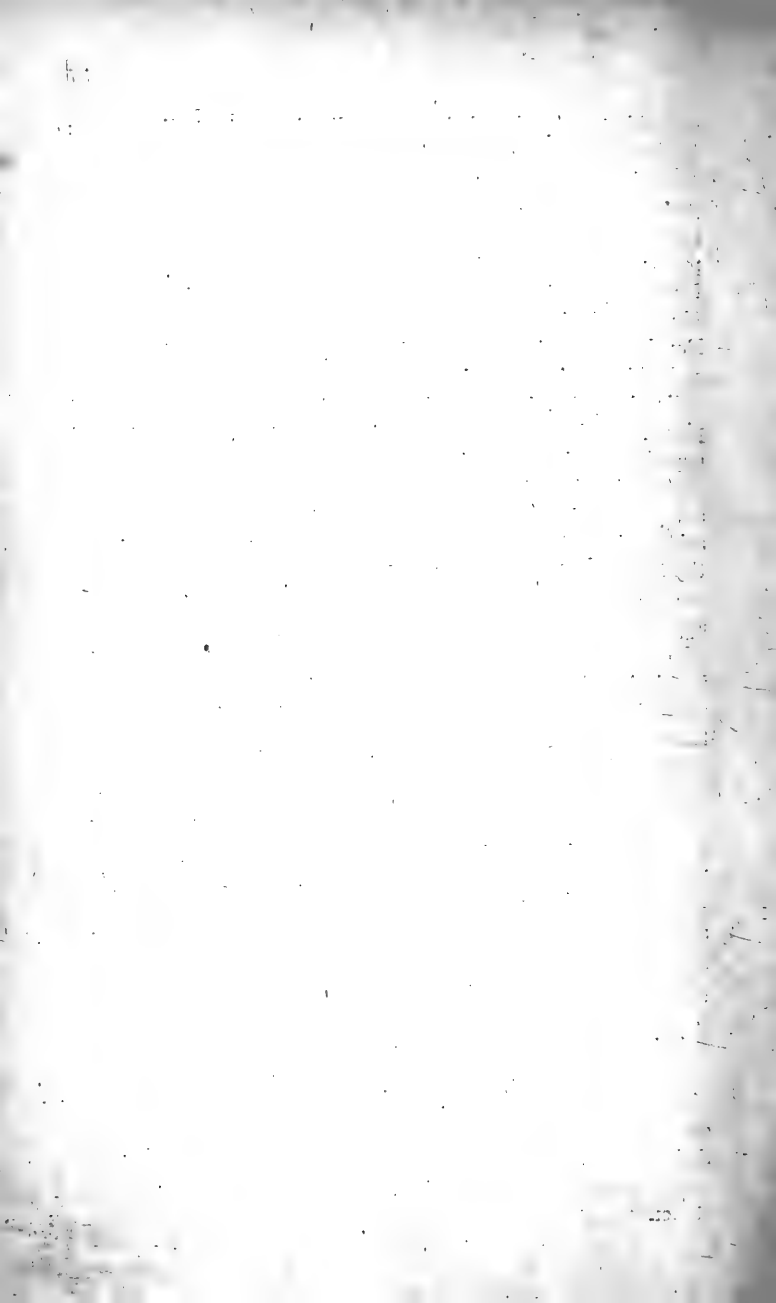
New Members.—Mr Hamilton, Castlebank; Miss Burnside; Miss A. E. Reid; Miss M. Reid; Miss M'Cracken; Mrs Murray; and Mr John Thomson.

Donation.—By Mr Brown, Dumfries, a Jew's petition in Hebrew.

Exhibits.—By the Chairman, a Collection of Australian Ferns ; by Mr Adamson, on behalf of Mr Welsh, Waterloo Place, an Imitation Slipper, made of gutta-percha, which was found four years ago at Blackshawbank, where it had been washed ashore full of tobacco, having evidently been used for smuggling purposes ; also a very curious Key which had been made and used for many years by the late Mr Duff, of Cluden, he being the same Mr Duff who invented the double screw thread in 1830 ; also a Punch Bowl, which had been in the Duff family for 110 years, and which during that time had been used at several baptisms, ordinations, &c., in the parish. Mr Adamson also exhibited a piece of Sandstone from Locharbriggs, showing the footprints of one of the extinct *Labyrinthodon*.

Scandinavians in Dumfriesshire.—Mr T. Brown, teacher, read a paper on this subject. In acknowledging a vote of thanks, he said he had given some attention to the monumental remains of the Norsemen in the district, and had come to the conclusion that the runes on the Cross at Ruthwell were not Scandinavian, but appeared to be rather of Saxon origin ; he quoted Mr Kemble, who first threw out this idea, and who also said “That the inscription dated somewhere about 680,” which was long before we had any trace of the Scandinavians either in England or Scotland.

Local Names of Plants.—Mr F. R. Coles, Tongland, then read a paper entitled “Local Names of Plants.” The paper dealt with the mistaken idea, only too prevalent among those interested in Botany, that the scientific name, usually the Latin one, had slight importance or might even be dispensed with. The author, using the term “local” in its widest sense, as including all names, German, French, Scotch, or English, in distinction from the Latin name by which a plant was alone recognised by all who worked towards a scientific end, illustrated his argument by copious references to the names of common plants on the Continent and in Britain, the result showing that not only was one plant known by half-a-dozen different names in these countries, but that half-a-dozen different and entirely dissimilar plants were often called by one and the same name—to avoid which puzzling confusion a little labour well bestowed in learning the nomenclature of Science would work wonders, and in the end be a real gain to the student.



FIELD MEETINGS.



DUMFRIESSHIRE & GALLOWAY
SCIENTIFIC, NATURAL HISTORY, AND
ANTIQUARIAN SOCIETY.



FIELD MEETINGS, 1881.

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RERWICK.—7th May, 1881.

The first field meeting of the Summer Session, 1881, was held to-day under very favourable auspices. A large party left Dumfries by the 8.32 morning train for Dalbeattie, their number being increased by the way, and further augmented by a contingent from Castle-Douglas, who joined them at Dalbeattie. The granite workshops of Messrs D. H. & J. Newall were inspected, and also the paper-mill of Mr John Forsyth; and thereafter the company drove off by 'bus in the direction of Rerwick. Various objects of interest were observed in the course of the drive. A glimpse was obtained of the ruin of Buittle old Castle once the residence of the Baliols, and a place of great strength; and attention was called to rocky projections on the summit of a hill above Kirkennan, which form a configuration somewhat resembling a lion's head, and are so designated by the people of the place. A halt was made at the end of the road leading to Orchardton Tower, to which the party proceeded on foot, and the various characteristics of which were pointed out by Captain Wilson. The walls are of great thickness— $5\frac{1}{2}$ feet; and an intramural cork-screw stair conducts to the battlements. Only one floor now remains. On the top of the wall a bed of the lesser periwinkle (*Vinca minor*) was in full flower, and other portions of the battlements were carpeted with mosses and *Sedum Anglicum*. Lower down, both inside and outside of the tower, grew numerous plants of the Scale Fern (*Ceterach officinarum*)—a rare species in Scotland, whose only known habitat in the Stewartry is Orchardton Tower. Before the party left, Captain Wilson presented the Society with a pair of antlers of what was considered to be the old Irish Elk, found, along with the entire skeleton of the animal, at the mouth

of the Urr, about twenty years ago. The next halt was made at the picturesque and tidy little village of Auchencairn, where refreshments were partaken of. A few miles of further driving brought the party to Dons Knowe, where they left the conveyance, and proceeded to the shore at Barlocco. Here a mine formerly wrought for barytes was examined, and numerous specimens were picked up. On the wild wave-beaten coast the remarkable Caves of Barlocco were visited, the party being let down the cliffs by means of ropes and ladders furnished by the tenant of Barlocco, whose sons assisted in the process. The Black Cave, which is 256 feet long, 90 wide, and 40 in height, was first entered. It is a vaulted chamber, floored with shingle, and huge boulders are strewn about it. At the extreme upper end there is a little space above high-water mark whereon numerous rock-pigeons breed. The Rerwick shore is now almost the only place in Galloway where these birds nest and bring forth their young. The White Cave was next entered. It is perhaps the most wonderful natural formation in Galloway. The "gateway" is a vast Gothic arch, through which you pass into a magnificent temple "not made with hands." The flooring of the cave is composed of pieces of granite rounded to pebbles by the attrition of the tides, and the roof, which rises gradually, was decorated with the luxurious fronds of Sea Spleenwort. The length of the cave is 252 feet; greatest width, 190 feet; height, 60 feet. Nobody who has not visited these caves can form any idea of their grandeur. They are not inferior to Fingal's, we are told, in any particular, except that of the regularity of the strata forming the sides of the latter. Along the romantic shore some very fine corallines were observed, and Mr F. W. Grierson captured the rare Oil Beetle (*Meloe pro Scarabeus*). Here the party were joined by a company of kindred spirits from Kirkcudbright. The Hartstongue Fern was discovered, growing in thousands, by Mr J. W. Kerr, in a little dell at the top of the cliffs. Rerwick Kirkyard having been inspected, the party proceeded to the Dundrennan Arms Hotel, where tea was partaken of. Refreshed and reinvigorated, they next examined the beautiful ruins of Dundrennan Abbey, where a rare variety of the Common Maidenhair Spleenwort (*Asplenium trichomanes*, variety *incisum*) was found in one of the vaults. On the return journey to Dalbeattie, a remarkably fine view was obtained of the zodiacal light, which projected fully 30 degrees in the heavens, and is a rare occurrence so late in spring.

QUEENSBERRY.—*June 4th, 1881.*

The second field meeting of the Session took place on Saturday, 4th June, Queensberry Hill being the locality chosen. Anticipating a continuance of the hot weather of the previous week, most of the members preferred to remain at home, and there was consequently only a comparatively small muster, which included, however, for the first time in the history of the Society, several ladies. Leaving the King's Arms Hotel at nine o'clock, the party drove by waggonette to Mitchellsacks, near the foot of Queensberry. The morning was cool, and the landscape through which the journey lay, always picturesque, was enriched by the green and hawthorn bloom of early summer. Amisfield Tower was passed, hidden by embowering trees; in the vicinity of Glen-corse a passing peep was obtained of the romantic strath of the *Æ*, where portions still remain of the ruins of Glenæ Castle; and a remarkably pretty linn was visited on the moor at the head of the Gubhill property, where the waters of a small stream are precipitated down a precipice of shelving rock on one side the road, flow through a culvert beneath the road, and leap over a series of rocky declivities in the natural channel on the other side. Past Loch Ettrick—an artificial pond on a large scale, and well stocked with Loch Leven trout—the party went along an upland road, where no tree was visible excepting a small plantation beside the loch, and not even a furze bush or a thorn, until Mitchell-slacks was reached. Here the horses were stabled, and Mrs Harkness and her son gave a cordial welcome to their visitors. Mr Harkness afterwards put the party on the right track for making the ascent of Queensberry, accompanying them as far as Hogg's Lodge, a ruined stone hut or bothy which was used as a shelter and resting place by the Ettrick Shepherd when in the service of the then Mr Harkness of Mitchellsacks. It was in this lodge that Hogg received and entertained James and Allan Cunningham, whom he there met for the first time. "Thus began," says Hogg, "at that bothy in the wilderness a friendship and a mutual attachment between two aspiring Scotch peasants over which the shadow of a cloud has never yet passed." But the "shadow of a cloud" was passing over the party of natural-historians who were treading their toilsome way up to the summit of Queensberry—(*i.e.*, Queenberg or Queenhill). From that windy

elevation they had scarcely a moment to glance at the wonderful panorama of mountain peaks around and below when the cloud enveloped them, and they were driven down the hill in a perfect storm of wind and rain and hail. At the "farmer's ingle" they met, literally soaked. Here they managed to dry some of their garments, and listened to recitals of the Covenanting and other traditions of the Harkness family. The Harknesses of Locherben and Mitchellslacks have played a prominent and honourable part in Scottish history. James and Thomas, who were tenants of Locherben, were suspected, and, therefore, found guilty and condemned, in connection with the rescue of captive Covenanters effected in Enterkin Pass in 1684; and William, tenant of Mitchellslacks, had already been denounced by royal proclamation as a resetter of fugitives. The two former were conveyed to Edinburgh, where Thomas was executed, but James managed to escape from the Calton to the Continent, whence he returned under the Revolution Settlement. A comfortable repast having been partaken of at the hospitable table of Mrs Harkness, a hearty vote of thanks was awarded to her and her son for the kindness shewn to the storm-smitten naturalists. The homeward journey lay by Auldgirth. Rain continued to fall, but the drive was made enjoyable by social contiguity, and by fits of recurring hilariousness, which kept the company from lapsing into mute and miserable melancholy.

During the day Mr Lennon captured the following among other beetles:—*Harpalus tardus*; *Berosus spinosus*; *Myrmedonia collaris* (rare), in ant's nest; *Silpha opaci*; *Morynchus æneus*; *Parmes prolificornus*; *Corymbetes pectinicornus* (rare); *Otiorhynchus rugifrons*. The Cloudberry (*Rubus Chamæmonus*), an Alpine plant, was picked up on Queensberry in flower.

CAIRNSMORE.—2nd July, 1881.

The third field meeting of the Summer Session was held to-day, the solitary event of the programme being the ascent of Cairnsmore-of-Fleet; but as that is a mountain 2331 feet in height, it afforded exercise sufficient to satisfy the strongest; and the very imperfect train service at the moorland station of Dromore, from which the walk was begun, rendered it necessary to give up to it

the whole of a summer day, leaving Dumfries at seven in the morning, and not reaching it again till within an hour of midnight. In these circumstances there was an unusually meagre muster of members, but what the party (six in all) lacked in number they appeared to have gained in enthusiasm. Two of the six included Mr Shaw, Tynron, and Mr T. Brown, Auchenhessnane, who had come to Dumfries the evening before in order to have a fair start in the morning; and the party were joined in the course of the journey by other three gentlemen. The weather fortunately favoured the enterprise, and a most enjoyable and not unprofitable day was spent. The base of Cairnsmore is some three miles from Dromore Station, in a north-westerly direction, and is reached over a heathy tract of rising ground. Here the plaintive note of the Golden Plover was frequently heard, and the bird itself was seen. The little Sundew and other plants common to peaty and heathy soils were met with in abundance. The hill seems to be formed of a mass of syenite, and is lightly covered with vegetation, which affords sustenance to black sheep and some goats. The Raven continues to find a haunt on Cairnsmore, undisturbed by man. Four nests were discovered, but whether of as many pairs or merely the successive abodes of the same pair, could not be said. Two parent birds were observed hovering about the cliffs, evidently watching with interest, if not solicitude, three fledglings that were making their first assays on the wing. The carcass of another Raven was picked up in the course of the day. A Golden Eagle has been seen on Cairnsmore within the memory of one of the party, but no such sight rewarded them to-day. This mountain is not a very rich field for the botanist, but a diligent search discovered some rather uncommon plants. The entomologists also had their finds. These included four examples of the *Carabus glabratus*—a large dark beetle never noticed further south than the Perthshire Hills until last year, when Mr Lennon found it here; the *Agrotis porphyrea*, a dark brown moth with a net-work pattern on the wings, from which it receives its common English name of the True-Lover's Knot; the *Scotiona Belgiaria*, or Grey Scalloped Bar, a moth not easily distinguished from the granitic block beside which it rested; the *Cænonympha Darus*, or Marsh Ring Butterfly; the Emperor and Fox Moths; and the high-altitude moths *Carabus violaceus* and *C. cancellatus*. Numerous specimens

of the Viperous Lizard were also procured, and what was either a variety of the Smooth Newt or a distinct species was caught in a muddy pool near the summit. Many fine quartz crystals were picked up; but the only specimen of the rarer stones said to be mixed with them was an agate, found by Mr Bruce of Slogarie. The view-hunter had perhaps the "largest content" in recompense for his arduous ascent. On all sides a magnificent sky-bounded prospect extended wide before the eye of the enraptured observer on the mountain top. Ailsa Craig was very distinctly seen without the aid of a glass, and the Mull of Cantyre could be descried in dim outline; but the Irish Coast, the Isle of Man, and the Cumberland mountains were hid behind a haze. There is a story told of a shepherd on Cairnsmore who boasted that he could look into five kingdoms from it—the Kingdoms of Scotland, England, and Ireland, the Kingdom of Man, and the Kingdom of God. An interesting experiment was made on the top of the hill, showing how the heliograph worked. According to prearrangement a party at Rhonehouse—twenty miles away—flashed a mirror in the sun at one o'clock, and the gleams were distinctly seen, notwithstanding that the sun was shining through a cloud-screen at the time. Descending the hill, the party divided, one section returning by the base, and the other walking over the knee of Cairnsmore and Meikle Mactaggart, and round the spur of Craig Ronald, to Loch Grannish, to ascertain whether the Black-backed Gull still breeds there. They (the latter division) were rowed over to the island, but were informed that although the gulls still frequent the loch they have ceased to build there, their nests having been wrecked by floods two years in succession.

The following is a list of the rarer plants found on Cairnsmore:—*Asplenium veride*, *Hymophyllum Wilsoni*, *Sedum rhodolia*, *Saxifraga stellaris*, and *S. hypnoides*.

August, 1881.—It was arranged to hold this month's excursion on Thursday the 4th, and visit Annan and district; but owing to the unfavourable weather it was abandoned.

September, 1881.—The excursion for this month was likewise abandoned.

DUMFRIESIRE & GALLOWAY
SCIENTIFIC, NATURAL HISTORY, AND
ANTIQUARIAN SOCIETY.

FIELD MEETINGS, 1882.

KIRKCUDBRIGHT AND ITS ENVIRONMENTS.—*6th May.*

The first field meeting of this session was held on Saturday, 6th May, the places chosen for visiting being Kirkcudbright and its environments and the Borness Cave. A party numbering about 20 left Dumfries by the 8.30 train, and arrived at Kirkcudbright at 9.50. At the station they were met by Mr G. Hamilton of Ardendee, Mr Coles of Tongland, and Mr John M'Kie, R.N., curator of the Kirkcudbright Museum, who conducted them to the museum and pointed out the most interesting objects of archæology and natural history under his care. The party next proceeded to the Moatbrae, the site of an old convent of the Greyfriars, immediately opposite the old castle and on the south side of the river Dee. It is supposed that the convent was founded by Alexander II., but owing to the records disappearing at the time of its suppression nothing certain is known of its former history. In 1564 the convent, which had been previously despoiled, was bestowed by Queen Mary upon Sir Thomas Maclellan of Bombie, Provost of Kirkcudbright, and the Friars' Church adjoining was granted, at the request of the General Assembly, to the magistrates of the Royal Burgh, to be used as a Protestant place of worship. Out of the ruins of the convent Sir Thomas erected Kirkcudbright Castle, whose massive walls, having withstood the storms of three centuries, are still complete in form, although they are now densely covered with ivy. It is of the Gothic style of architecture, and has above the

entrance door the escutcheon of Sir Thomas Maclellan. The party then proceeded to the ancient Market Cross, after having had pointed out to them the site of the old public-house at the Moat Well, where Kenmure challenged Claverhouse to mortal combat, to revenge the murder of his kinsman, Bell of Whiteside. The tower of the County Buildings was next visited, and from this elevation an admirable view of the sea and the country around was obtained. As it was now noon the party retraced their steps to the Commercial Hotel, where waggonettes were waiting to convey them to Senwick Churchyard and the Borness Cave. The churchyard, which is situated upon a wooded height overlooking the estuary of the Dee, and commands a view of singular beauty, is one of the most interesting and romantic in the district. The ruins of the Church were used in the construction of a more modern building, which is now in its turn also disappearing. The inscriptions are in solitary instances quaint and pointed, but the majority are commonplace. From the churchyard the party proceeded to Balmangan farm house, where an old tower was inspected, and where they were regaled with refreshing draughts of milk. From Balmangan they drove to South Park. Here they were met by Mr Currie, and conducted to the Borness Cave, where many of the remains to be seen in the Edinburgh Antiquarian Museum were unearthed. The Cave is not very large, but the entrance, which is shaped like an equilateral triangle, is lofty and expansive. Several minute bones and pieces of charcoal were found, and many beautiful stalactites were picked up by the exploring party. As the time at their disposal was now short, they returned to the waggonettes, and noticed on their homeward journey several old fortresses and ruined fosses constructed by the warlike tribes which inhabited this part of Scotland from the time of Cæsar to the thirteenth century.

Among the botanical specimens collected during the day were the following :—*Sanicula Europea*, *Adoxa moschatellina*, *Euonymus Europæus*, *Erodium cicutarium*, *Eryngium maritimum*, *polygonatum multiflorum*, *arum maculatum*, *fedia olitoria*, and *ophioglossum vulgatum*.

The party reached Kirkcudbright about five o'clock, and having partaken of tea at the Royal Hotel, they left by the 6.35 train, and arrived in Dumfries about eight, having enjoyed a very pleasant excursion.

GLENQUHARGEN CRAIG, &c.—*3rd June, 1882.*

The second field meeting of the Session was held on 3d June, the places selected for visiting being Tynron Doon, Corfardine Slate Quarry, The Glen of the Scour, and Glenquhargen Craig. As the morning was dull and threatening rain, only a small party assembled at the Dumfries Station to meet the train due at 8.25 for Thornhill. On arriving at Thornhill they were met by Dr Grierson; and having taken their seats in the omnibus and waggonette which were in waiting, they were soon on their way for the Scour. The first object noticed was the Runic Cross, in a field near the Nith, but as the programme for the day was long, this was only observed from the road. The first halt was made at the Scour Bridge, and here the party were joined by their "guide, philosopher, and friend," Mr Tom Brown, who was to conduct them throughout the excursion. Turning to the right at the bridge, they proceeded along the romantic glen through which the Scour winds its tortuous course, and as the road was rough, several of the party preferred walking, and collected specimens along the banks of the stream, adjoining fields, and roadsides. They continued in this way until Glenmarlin was reached, when another halt was made to admit of those who were inclined to ascend Tynron Doon doing so. The Doon—a fortified hill with a nose, as the name signifies—was not very inviting on this occasion, for it was enveloped in a cloud, and a shower coming on deterred the party from attempting the ascent. This hill, when seen from near Thornhill, presents the appearance of a human profile, and at its top there are the remains of an ancient fortress. It is said that Bruce, after he had slain Comyn in Dumfries, fled to the summit of the Doon, and remained there in safety for some time. Instead of climbing the height the party inspected a Roman Camp on its side, and two curious forest growths. The first was a rowan tree growing out of the stem of a crab, and the other was a large elm whose branches had descended and taken root, springing up again into as many separate trees. The next halt was at Corfardine Quarry, which was visited by the geologists. This place is memorable from the circumstance that Hogg, the Ettrick Shepherd, was tenant of the farm in which the quarry is situated. In 1814, Hogg, writing to a friend, says of his experience of the place:—"It pleased God to take away by death

all my ewes and lambs, and my long-horned cow and my spotted bull; for if they had lived, and if I had kept the farm of Corfardine, I had been a lost man to the world, and mankind should never have known the half that was in me." The drive was continued for a short distance along the glen until Auchenhessnane, the residence of Mr Brown, was reached, where the party were received and most hospitably entertained by Mr Brown, sen., and Mrs Brown. Here were inspected several cases containing botanical specimens, and the eggs of all the birds in the district, collected by Mr T. Brown. The garden and fernry, also inspected, contain specimens of nearly all the British ferns.

A new feature was now introduced into the excursions in the form of a "Business Meeting," at which Sheriff Hope, vice president, presided, and the Rev. G. Sturrock of Corsock Manse, and Messrs G. Hamilton of Ardendee and J. Dunlop of Borgue Academy, were proposed and duly elected members of the Society. It was agreed that the next field meeting should be held at Southwick and Colvend, going by way of Dalbeattie.

Having awarded Mr and Mrs Brown a hearty vote of thanks for their hospitality, the party resumed their seats in the machines. A drive of seven miles through the well-wooded mountainous country by way of Chanlockfoot brought them to Glenmannon farm house, where they arrived about two o'clock. Near to the farm house a large rocking-stone, roughly estimated to contain 90 cubic feet, and weighing fully 6 tons, was first visited. As two hours were now at their disposal the party scattered, each bent on his different pursuit. The Craig is a towering mass of Silurian rock, rising to a height of more than 1000 feet, presenting a bold and rugged outline. Far up its slopes were found two nests—a raven's and a buzzard's—both being empty. At four o'clock the party resumed their seats for the homeward journey, returning by way of Merkland, Auchenbainzie Hill, and Drumlanrig. At Merkland Glen a halt was made to inspect a small loch, the islands in which are the breeding grounds of the sea gulls. The drive down the road towards Drumlanrig Castle, with the well-wooded valley stretching out to the right and left, was most enjoyable. It was intended to stop at Tibber's Castle—the Castle of Tiberius Cæsar—but as the time would not permit the party proceeded on to Thornhill, where they arrived in time to meet the train due in Dumfries at 8.40, having had a most enjoyable excursion.

The following is a list of plants found during the day:—*Geranium sylvaticum*, *Trollius Europæus*, *Melica uniflora*, *M. Nutans*, *Listera Cordata*, *L. Ovata*, *Gnaphalium dioicum*, *Lycopodium selago*, and *Lysimachia nemorum*, found along the Scaur and Tynron Doon. *Meum Athamanticum*, *Pinguicula vulgaris*, *Saxifraga hypnoides*, *Geranium Lucidum* and *Bartramia fontana* (Apple Moss) near Glenquhargen Craig; *Habenaria albida*, *H. viridis*, *Pyrolia media*, *Rubus saxatilis* and *Menyanthes trifoliata* at Merkland Glen. Of the ferns there may be mentioned *Cryptogramme crispa* (Parsley), *Scolopendrium vulgare*, *Nephrodium Oreopteris*, *Polypodium Phegopteris*, *P. Dryopteris*, and *Aspidium aculeatum*.

COLVEND.—1st July, 1882.

The third field meeting was held on the 1st July, and according to the programme, “Barean Loch, Douglas Hall, Southwick Pre-Reformation Kirk and Kirkyard, Auchenskeoch Castle, and other places in Colvend and Southwick,” would be visited. A party of twenty assembled at the Dumfries Station, and took the 12.20 train for Dalbeattie. Here they were joined by other members, and immediately proceeded, per 'bus, towards Colvend. At a point of the road about a mile and a half from Colvend Manse, they were joined by the Rev. J. Fraser, and at his suggestion dismounted to inspect the Lake Dwellings in the Barean and Ironhash Loch; the 'bus meanwhile to proceed to the Manse and wait there for the party. The Loch is prettily situated among hills which have their sides covered with heather, and studded here and there with large granite boulders and patches of straggling brushwood, presenting on the whole a most striking and picturesque landscape. A boat had been kindly placed at the disposal of the party by Mr Dinwiddie, to enable them to visit the islands and explore the remains of the Lake Dwellings, which were found there. The piles on which one of these structures was originally built were distinctly visible, and a log of oak was fished up by one of the party. From the Loch they proceeded, botanising by the way, until they reached the Manse. Having partaken of Mr Fraser's hospitality a Business Meeting was held, when Mr Fraser occupied the chair. The Secretary read a letter from the

Rev. W. Graham, suggesting that the Society should visit Lochmaben Castle and Lochs at their next excursion, and this proposition was unanimously agreed to. On the motion of Mr Wilson, seconded by Mr Brown, the thanks of the Society were awarded to Mr M'Andrew and his assistants for the "Flora of Dumfriesshire and Galloway," which had now been published. The Chairman exhibited a small swivel-handled bell, made of brass, having a wrought-iron handle and bearing the inscription—"For the Parish of Southwick and Colvend. A. Z. Fecit 1702." His conjecture was that it had been used on the occasion of funerals.

Having awarded Mr Fraser a hearty vote of thanks for his hospitality, the party resumed their seats in the 'bus, and drove towards Douglas Hall, where they arrived about five o'clock. As two hours were now at their disposal the members scattered, some botanising, others gathering shells or collecting insects. At seven o'clock the party re-assembled at Douglas Hall; and as it was rather late they decided to return to Dalbeattie by the high road past Fairgirth, where there formerly stood St. Lawrence's Chapel—a Roman Catholic edifice—instead of carrying out their programme. Not a trace of the chapel could be discovered, it having been pulled down and utilised in the building of the adjoining farm houses. The party reached Dalbeattie about nine o'clock; and after a substantial tea, left for Dumfries by the 10.20 train, having spent a most enjoyable day.

The following plants were found during the day:—*Hypericum humifusum*, *H. elodes*, *Sedum telephium*, *S. acre*, *S. Anglicum*, *Scutellaria galericulata*, *Alsine verna*. (This plant was found here in 1864, by Mr P. Gray, and was now thought to be extinct.) *Allium Vineale*, *Senecio viscosus*, *Geranium Sanguineum*, *Primula veris*, *Genista tinctoria*, *Verbascum*, *Thapsis*, *Vicia angustifolia*, *Isaetes lacustris*, *Crithmum maritimum*, and *Asplenium marinum*.

LOCHMABEN CASTLE.—12th August, 1882.

The fourth field meeting of the Session was held on the 12th August, when Lochmaben Castle and Lochs were visited. The party left Dumfries by the 1.15 P.M. train, and on their arrival at the Lochmaben station they were met by the Rev. W. Graham

of Trinity, who had kindly offered to guide them to the various places of interest. The Town Hall was first visited, where some objects of antiquity were duly examined and explained. From there they proceeded to the site of the old Castle, situated on the Castlehill overlooking the Kirk Loch. This building was probably erected before the days of David I., and is supposed to be the castle referred to in the charter by which David conveyed to Robert Bruce, the second Lord of Skelston, "all the territory called Estrahanneit"—*i.e.*, Annandale, "with his *castle* there and all the customs pertaining to it." Round the Castlehill there are traces of a deep fosse, and near its summit heaps of building material crop above the surface. Near to the Kirk Loch, and at the west end of the town, is the "Kirkyaird" of Lochmaben, where stood the old parish church with its choir, dedicated to St. Magdalene. Within that sacred edifice a sanguinary conflict between the Maxwells and the Johnstones took place, which resulted in the total destruction of the building by fire, all the Maxwells who had taken refuge therein perishing. The party next proceeded to the Castle Loch, and, having taken seats in four boats which were in waiting, sailed across to "Bruce's Castle," situated at the opposite side. Mr Graham described the building, and narrated several incidents connected with its history from the days of Bruce. He suggested that the present keeper of the "keys," Mr Hope Johnstone, and Mr Jardine, as "proprietor of the land without the gates," should be asked to allow the inner fosse to be cleaned out, so as to admit boats to pass round the Castle. A Business Meeting was now held on the site of the Old Castle, at which Mr Carruthers, of the Botanical Department, British Museum, and Mr Graham were elected Honorary Members, and Messrs Laurie and Duncan ordinary members. Several specimens of the fishes in the loch were obtained from the boatmen for preservation in the Observatory Museum, and a bottle of the water, which is of a greenish tint, was taken for analysis. Having thanked Mr Graham, the party returned to the landing stage, and from there proceeded to the residence of Mr Waugh, where an extensive collection of coins and interesting curiosities was inspected. A call was next made on the Rev. Mr Hill, who shewed his visitors over his extensive flower garden, which afforded a pleasing and refreshing variety to the day's enjoyment. The party returned to Dumfries about eight o'clock.

The following plants were found during the excursion:—*Ranunculus flammula*, *Nasturtium officinale*, *N. Palustre*, *Lycopus Europæus*, *Epilobium parviflorum*, *E. palustre*, *Senecio Aquaticus*, *Bidens tripartita*, *Cicuta virosa*, *Mentha Sabra*, *M. Aquatica*, *Myosetes repens*, *Potamogeton natans*, *Sparganium ramosum*, *Lemna minor*, *Typha angustifolia*, *T. latifolia*, and *Ænanthe crocata*.

In September the Society was to visit "The Martyrs' Tombs, Irongray, and the Skeoch Hill," but owing to heavy rain the excursion was abandoned.

KIRKBEAN.—5th May, 1883.

The first meeting of the summer session, 1883, was held on the 5th May, the district visited being Newabbey, Kirkbean, and Carsethorn. The weather was the most favourable that could have been desired, being bright and sunny, but not oppressively hot. The party numbered twenty, nine of these being ladies, who have become members for the first time this session. Starting from the Fountain at nine o'clock in two open conveyances, they drove without halt to the hamlet of Preston Mill, a distance of thirteen miles—fully enjoying the invigorating influence of the pure morning air; the sight of pasture and corn field, hedgerow and woodland, in the fresh verdure of a late spring, and studded with the white blossoms of cherry, gean, and sloe; and the beautiful panoramic scene which every winding of the road discloses. At Preston Mill—where, by the way, lived "the bonnie lass" of Allan Cunningham's song—they were joined by Mr William Black, gardener at Arbigland, whose intimate acquaintance with the geology and botany of the district enabled him to offer some valuable suggestions for their guidance, although, much to their regret, he was not able to accompany the party on their walking excursion. Having dismissed the vehicles, the party proceeded to explore the Gill, a pretty little ravine, in some of the deeper nooks of which the hartstongue fern was found growing in abundance, and some specimens with divided fronds were obtained. In an open and elevated spot, midway up, a short stay was made, that the

party might picnic on the green and hold a short business meeting. Here a commanding view was obtained of a long stretch of the Scotch and English coasts, which seemed almost to landlock the Solway, swelled at this time by a full tide that filled the estuary of the Nith, and bathed in a glowing sunlight. Along the opposite coast-line, ending in St. Bee's Head, could be seen the towns of Silloth, Maryport, Workington, and Whitehaven, and the eye rested beyond them on the bold outline of the Cumberland hills, still flecked with snowy patches. Having made the ascent of the hill, the party turned their steps down Kirkbean Glen, a deeper, more picturesque, and well wooded ravine, terminating beside the church and village. It was too early in the season to find many plants in flower, but the busy botanists found a sufficiency of interesting specimens with which to fill their vasculums; and if their industry was not rewarded with many of great rarity, there was in the constant and ever-varying loveliness of the scene—albeit not yet arrayed in the blooming charms of “leafy June”—a rich reward for the visit, and sufficient inducement to explore its every corner. Turning off a little before reaching the foot of the Glen, the company returned to Cavens, and passed through the policies, for which Mr Oswald had kindly given permission. Close to the house—a substantial mansion of antique appearance—are two magnificent trees, a plane and a chestnut, which were greatly admired. They next bent their steps towards Kirkbean Churchyard. There are here no tombstones of great antiquity, the earliest date noticed being in the early part of last century; but there is one of considerable interest because of its connection with Paul Jones, the hero of many privateering exploits, and who has been styled by an enthusiastic admirer, “the founder of the American navy.” His father was gardener at Arbigland, in the time of Mr William Craike, one of the most enterprising of agricultural improvers of his day, and there Paul was born. Over his father's grave he has erected a large flat monument. From the inscription on this tribute of filial respect it will be seen that the name which he adopted, and under which he figures in story, was an *alias* formed by an easy play upon that which properly belonged to him. It is: “In memory of John Paul, senior, who died at Arbigland the 24th of October, 1767. Universally esteemed. Erected by John Paul, junear.” The pedestrian part of the excursion ended at Carsethorn, where a few fragments of the coralline fossil limestone

that abounds along the shore were picked up. A substantial and welcome tea was provided in the Steam Packet Inn; and thus refreshed the party began the homeward journey, time unfortunately not permitting of a visit to Arbigland. A halt was made at Newabbey, to allow of an inspection of the ruined fane of the Lady Devorgilla. We were pleased to see continued indications of the watchful care which has so well preserved this noble relic of past magnificence, while so many equally interesting edifices have been suffered to crumble and decay. Many of the weaker parts of the masonry were recently strengthened by pointing and the replacing of fallen stones, and material was lying at hand for further work of the same kind. The drive back to town in the early evening formed a very pleasant finish to what had been to all a most enjoyable day.

At the Business Meeting referred to above, Mr Wilson, one of the vice-presidents, presided. Three new members were admitted, viz., Miss Kirkpatrick, Mr Henry Sawyer, and Mr Mitchell Kerr. Mr Wilson, at the request of the Secretary (Mr Rutherford of Jardington) shortly explained the distinctive characteristics of the different orders to which the plants which had been collected belonged. A cordial vote of thanks was passed to him for this service, and a hope was expressed that the practice would be continued at future field meetings.

Mr Wilson furnishes the following list of plants obtained:—*Anemone nemorosa*, *oxalis acetosella*, *Adoxia moschatellina*, *Chrysosplenium oppositifolium*, and *Mercurialis perennis*, abundant in the glens and roadsides near Kirkbean. *Cardamine pratensis*, *C. hirsuta*, *Myrrhis odorata*, *Tussilago farfara*, *Petasites vulgaris*, and *Equisetum arvense*, along the roadside near Kirkbean. *Barbarea vulgaris*, at Whinnyhill and Carsethorn. *Ranunculus hederaceus* and *Ajuga reptans*, near Ladyland farm. *Anchusa sempervirens*, at Ladyland and Newabbey. *Viola sylvatica*, *Luzula pilosa*, *L. sylvatica*, *L. campestris*, in the woods along the banks of the Kirkbean burn. *Orchis mascula* and *Listera Ovata*, near Kirkbean, the former being very abundant, but only one plant of the latter. Of the *Ferns* there may be mentioned *Scolopendrium vulgare* (almost exterminated), in the Preston Burn; *Asplenium Rutamuraria*, growing on the walls of the old Abbey; and *Hymenophyllum Wilsoni* or *H. Unilaterale* (very rare), found only in one place during the day's excursion, and now recorded for the first time from this district.

DURISDEER.—*2nd June, 1883.*

On Saturday, 2nd June, the second field meeting of the season was held under the most favourable auspices. The weather was bright and summerlike, with the sun's rays tempered by the intervening movement of filmy clouds and the blowing of a soft fresh breeze. There had been sketched by the committee a full and fascinating programme—"Rail to Thornhill; thence by road to Durisdeer, where the tombs of the Douglasses and the Roman Camp in Wall Path will be visited; thence to Dalveen Pass; a halt to be made at the ruins of Enoch Castle; thence to Thornhill, where Dr Grierson's museum will be inspected;" and, owing to the attractive character of the district chosen, and the remarkably pleasant weather, there was the largest turn-out of members and their friends which had ever been seen at any of the Society's field meetings—there being no fewer than forty, including several ladies. The party left Dumfries at 8.52 A.M. At Thornhill Station a 'bus, a waggonette, and another conveyance awaited them. There are two ways of reaching Durisdeer from this point—a roundabout way by Thornhill, and a straighter and shorter, but also a steeper and rougher, by Drumcork, East Morton, and Gateslack. It was resolved to proceed by the latter, since the return would have to be made by the former, as being the more convenient when Dr Grierson's museum was to be visited. Unfortunately the Doctor, expecting the cavalcade to roll along to Durisdeer through the ducal village, there awaited its approach; exhibiting a degree of philosophical patience as the time passed without the party coming, and preserving the same philosophic temper when he learned that he might have to await them there until the sun went down, if he did not, by some means, endeavour to join them in Dalveen, which he straightway set himself to do, and in due course did.

The drive to Durisdeer was greatly enjoyed. On the left, surrounded by its rich environment of wood, stands Drumlanrig Castle; beyond it and above it a wide expanse of fertile valley, with cultured, woody eminences, and leafy hollows, and the fantastic form of Tynron Doon; and skirting the side of the road as Gateslack is neared a delightful little glen, where the road takes a sharp turn, and botanists are strongly tempted to call a halt, and make exploration on both banks of the babbling little brook.

The "King's Quarry"—whence the name we know not—was inspected by some geologists in the party, as the conveyances were being dragged empty and slowly up a "stey brae;" but there was nothing of any consequence reported by them regarding it.

At Durisdeer Village the horses were stabled, and the church and churchyard visited. The former is a composite structure of two periods. A stumpy tower surmounts the more ancient portion, which is now unused, and the windows of which are sealed with stone and lime; the more modern portion is cruciform; the whole presenting a singularly rugged aspect. It is conjectured that the foundation of Durisdeer Church was due to the Stewarts, near the obliterated site of whose castle it still stands. It was originally a rectory belonging to the see of Galloway, served by a vicar; and in the fourteenth century it was constituted a prebend of Glasgow. As to the present church, the writer of the somewhat bald and meagre "Statistical Account" of 1841, probably the then incumbent, Rev. George Wallace, says: "It is inconveniently situated, being in the very east side of the parish. It was built in 1720, and is not at present in a good state of repair. It affords accommodation for 350 persons, and all the sittings are free."

The most gorgeous, and perhaps for most folk the most interesting, object at Durisdeer is the mausoleum of the Queensberry family. It is under the same roof with the church; and an arched doorway from the church to the tomb is filled with thick glass, through which the gaudy tomb can be seen by the worshippers in their pews. The building is vault-roofed and floored with marble cubes, black and white. Against the wall opposite to the church, the monument is built. It represents the Union Duke of Queensberry reclining on a couch beside the lifeless form of his wife. They are dressed to the last detail in the heavy finery of the court of Queen Anne. The Duchess wears her coronet; the Duke, resting his head on one hand, gazes down upon her face from the curtained recesses of a highly curled wig. There is no intimation here of humility, no lurking suggestion of a conscious sense of the levelling decrees of Fate; but haughty parade and pomp on the edge of the grave, and over the decaying bits of humanity beneath. The same vain spirit is expressed in the panegyric that forms the epitaph. It would be difficult to imagine anything finer than the drapery of the figures or the accuracy with which the fabric in delicate ease, has been imitated.

Dr Ramage is disposed to accept as well-grounded a belief that the figures are the work of Roubilliac, who was the most distinguished sculptor of that time. There is no conclusive evidence on the point, however. The contents of the vault, we are informed in a note in M'Dowall's "History of Dumfries," were examined in 1836, and were, "in addition to the dust of the Duke and Duchess, that of Isabella Douglas, wife of William, the first Duke; that of Lord George Douglas, son of the latter nobleman; of Charles, the third Duke; of his wife Catherine Hyde, daughter of Henry, Earl of Clarendon, celebrated for her beauty and wit by Pope and Swift, and who was the beautiful patroness of Gay, who said of her—

‘Yonder I see the cheerful Duchess stand,
For friendship, zeal, and blithesome humour known;’

of Charles, Earl of Drumlanrig, younger son of the third Duke; of Elizabeth Hope, Dowager Countess of Drumlanrig; of Henry, Lord Drumlanrig; and of Elizabeth, daughter of the Union Duke." In the architrave of the mausoleum there are several antique sculptured stones relating, it is believed, to various branches of the Douglas family; and there are a few articles which were employed in the older sanctuary preserved here. The churchyard contains many curiously figured stones; and there is one to the memory of Daniel M'Michael the Covenanter, who was shot in Dalveen Pass by Sir John Dalziel, and whose remains were here interred.

The name "Durisdeer" is supposed to be derived from two Celtic words indicating the opening of the forest; and Dalveen—the "lang glen" of Burns' song, "Last May a braw wooer"—is also derived from two roots signifying the smooth field. It is evident that there must in early times have been large stretches of forest in and beyond the parish; and the beautifully formed mountain eminences through which the Dalveen pass conducts, and whose steep sides are clothed with a verdure soft, smooth, and velvety as that of a well-kept lawn, render the name singularly appropriate. Durisdeer was the scene of that last fatal expedition of Johnie of Braidislee which the old ballad so pathetically relates—

Johnie has buskit up his good bend-bow,
His arrows ane by ane;
And he has gane to Durisdeer
To hunt the dun deer down.

But less mythical personages than John of Braidislee have hunted other game in Durisdeer. After Wallace had relieved Sir William Douglas at Sanquhar Castle, "through Durisdeer he took the gainest gate," as Blind Harry tells us, towards Lochmaben; and we are further informed that he captured the Castles of Durisdeer, Enoch, and Tibbers from the English.

"Thir three captains he sticked in that stound,
Of Durisdeer, Enneth, and Tybristoun."

The naturalists, after quitting the churchyard, proceeded along the Wall Pass, a wild mountain path conducting direct from the village to Crawford Muir, a distance of about five or six miles. On the other side of a small stream which steals, scarcely visible, at the foot of the hollow, there are remains of a Roman camp, and traces of a Roman road which led on to Crawford Muir, and was there connected with the greater road which the Romans had formed into Annandale.

These objects of antiquarian interest having been inspected, a Business Meeting of the Society was held—Dr Gilchrist presiding—when Mrs Gilchrist was proposed and admitted a member, and some arrangements were made relative to the intended visit of the Cryptogamic Society to Dumfries. Thereafter the bulk of the party returned to the village, and drove along Dalveen Pass; a few others adhered to the Wall Pass, intending to rejoin their friends at the top of Dalveen. The sole of the Wall Pass is a difficult but not dangerous cart-road. For a portion of the way it is quite soft and turfy under foot; for another portion it is exceedingly stony; for the rest it forms the bed of a stream after rain, and you are obliged to pick your steps through bits of spongy moor. On the right hand side, going towards Lanarkshire, it was observed that the hills are covered with heather, and that there is little or none visible on the hills to the left; but when the march between the two counties is reached there is plenty on both sides, and the country opens upon Crawford Muir. The boundary line at this point is also the watershed. On one side of a fence you have the drainage percolating towards the streams that feed the Nith, and on the other side a considerable burn brawling over a bed of Silurian to its junction with the Daer, which is a famous trouting stream, and is maintained by some to be the true source of the river Clyde, since it is larger than the Clyde burn, which falls into it, not it into the Clyde. Pursuing their

unhindered way "o'er muirs and mosses many, O," the pedestrians turned on the left towards the old Edinburgh Road, which runs along Dalveen Pass, and which at this point enters upon Crawford Muir. Of the muir the most and the best that can be said is that it really is a muir—a vast extent of flat, spongy, altogether treeless land, on which there are pretty effects of brown and purple, and on the far-off verge of which the Caledonian Railway runs.

At Trollos House, which is now inhabited by a shepherd, a pastoral repast of milk and cheese and scones was partaken of. The house is two-storey, built by a former proprietor who has left behind him some memorials of personal eccentricity. The house itself is one of them. It is bridged over a mountain stream, which murmurs a drowsy lullaby in dry seasons beneath it, and roars with the voice of a cataract when the spate is on, and rock and other mountain *debris* are tumbled along its steep and rugged channel. On the opposite side of the road, in a small enclosure, where the underlying Silurian crops above the surface, covered with a scruff of lichen and moss, and the bleached and broken trunks of a circle of Scotch pines that had wrestled in vain with the violence of the wind and the winter in this high unsheltered region, project like a row of decayed and irregular teeth, there is a freestone monument, with four square panels, and a pyramidal top, terminating in a ball. On one of the panels there is this inscription: "This tomb, erected by James M'Turk of Stonehouse and John Forsyth of Troloss, Esqs., in 1815." And on another panel, partly broken: ". . . ies interred Menzies of Troloss, who died in 1768, aged 34 years. Likewise Mrs Ann Johnston, his wife, who died in 1766, aged 34 years, and their three children Isobel, Catheren, and James. Also, Jean Menzies, sister of the above Adam. She died 1763, aged 24 years. *Ætas supervenit Ætat., ut unda undæ.*" The English of which is, "Age comes on age, as wave on wave," a sad reflection chastely worded. On this lone but enjoyable spot Mr Menzies had built for himself and his a nest, and made of the place a little world for him and them. When the angel of death passed into their dwelling and robbed them of their children, they seem to have clung to them still, and to have desired to bury them near to their own home. This probably accounts for the tomb on the mound.

A section of the party had remained at Dalveen Toll, where a

pass penetrates the hills to the Wall Path at the Roman Camp. Between the Toll and Troloss there is a remarkably pretty spectacle. On one side the road, the Lavern Burn precipitates itself over the ridge of a hill, down whose side it has worn a deep ravine, shelved with projecting rocks. From shelf to shelf the stream descends, and forms a succession of waterfalls from top to bottom. Under a bridge over which the road passes the stream continues to descend a precipitous bank to the green meadow, where the Dalveen Lade receives it, and the two become the Carron Water. The character of the scenery in the Dalveen Pass is entirely unique. It has not the savage ruggedness of the Enterkin; it is a surprising combination of the wild and beautiful; and we know nowhere else that anything so picturesque in its way may be seen as the long extent of meadow far down beneath the level of the road, with the Carron glittering in silvery sinuosities like a snake in the bright green grass, and the beautifully rounded mountains carrying up the green of the meadow against the blue of the sky.

At Durisdeer Mill a pause was made, and some refreshment partaken of at the establishment of Mr John Grierson, who relieves the prosaic monotony of a country merchant's life by writing and printing poems in a minute pre-Raphaelite vein. Afterwards the party drew up at the site of Enoch Castle—of which there is no stone left, but which was at one time a strong fortress, situated on a precipitous bank of the Carron. At this point the glen through which the Carron flows is one of the sweetest bits of sylvan scenery conceivable; and it is said that it used to be a favourite resort of Gay when sojourning with the Duke and Duchess of Queensberry at Drumlanrig.

A short stay was made at Thornhill, where Dr Grierson's wonderful garden and his only more wonderful museum were hurriedly inspected, and his hospitality, as dispensed by his kindly housekeeper Mary, was partaken of.

The party returned to Dumfries by rail about eight o'clock, everyone perfectly delighted with the day's proceedings.

Mr Wilson furnishes the following list of plants, and Mr Lennon the list of coleoptera:—

List of Plants: *Pinguicula vulgaris*, *Ranunculus hederaceus*, in wet places on the hills; *Potamogeton natans*, *Draba verna*, *Helianthemum vulgare*, *Polygala vulgaris*, *Viola tricolor*, *Viola*

Lutea (rare), *Empetrum nigrum* (crow-berry, rare), *Saxifraga hypnoides* (rare), *Lathyrus macrorrhizus* (Heath pea), in the Dalveen Pass; *Myosotes versicolor*, *Pedicularis sylvatica*, *Geum rivale*, and *Equisetum sylvatica*, along the roadside; found *Stellaria nemorum* (rare), at Enoch Castle. Of the ferns there may be mentioned: *Botrychium lunaria* (moonwort), growing along the roadside, and *Polypodium phegopteris* (Beech), *P. dryopteris* (Oak), *Lastrea montana*, *Allosorus crispus* (Parsley), *Scolopendrium vulgare*, and *Hymenophyllum Wilsoni* (Filmy Fern, rare), in the Dalveen Pass; and *Cystopteris fragilis* (Bladder Fern), at the Dalveen Pass and Enoch Castle.

List of Coleoptera: *Cicindela campestris*, *Carabus arvensis* (rare), *C. clathratus*, *C. violaceus*, *Libria chlorociphola* (rare), *Anchomenus gracilis* (rare), *A. oblongus*, (rare), *Amora bifrons* (rare), *A. spinipes* (not common), *Bembidium femoratum*, *B. doris*, *B. quadripustulatum*, *Corcyon minutus* (not common), *Quedius lateralis*, *Q. xanthopus*, *Q. impressus* (rare), *Silpha sinuata* (not common), *S. Opaca* (not common), *Aphodius hæmorrhoidolis* (rare), *A. inquinatus*, *Geotrupes mutator*, *G. punctatostriatus*, *Corymbites cuprens*, *C. metallicus*, *Agriotes sputator*, *A. lineatus*.

HODDOM CASTLE, REPENTANCE TOWER, AND CARLYLE'S TOMB.

7th July, 1883.

A large party (thirty-three ladies and gentlemen) participated in the July excursion. In the early morning the weather prospect was disappointing, but only one or two slight showers fell during the day, which was otherwise dry and fine. After a pleasant drive, the party arrived at Hoddom Castle about mid-day. The Castle is of the old Scotch baronial style of architecture, and belongs to different periods. The central tower is now the only part existing of the original Castle, which was built in the 15th century by Lord Herries from the stones of an ancient chapel; and, with the exception perhaps of the outer walls, the other portions of the building are comparatively modern, extensive additions being made so recently as 1878. To the back of the Castle and in the walls are the remains of Roman altars and inscriptions, which were discovered at the Roman camp of Birrens

or Burrens, a few miles distant, and also several fossils. Agricola is the reputed founder of this Roman station, and the fossæ, aggeres, and prætorium of the camp on the neighbouring height of Burnswark, from which innumerable roads diverge in every direction through the southern parts of the kingdom, were also formed by this distinguished Roman general during his governorship of Britain. Built into the wall to the west of the Castle is what has apparently been the lintel of a door, and is inscribed (as was the custom in early times) with the date, 1677, and a pious quotation—

16. GOD BE [M MR MC] HERE. 77.

The letters within the brackets, Mr Barbour is of opinion, are probably the initials of the person residing within the house.

The Tower of Trailtrow, or, as it is more commonly called, Repentance Tower—a name which it owes obviously to the word “Repentance,” which is carved between the figures of a dove and a serpent over the doorway—was next visited. It is situated on an eminence close to and overlooking the Castle, but is in the neighbouring parish of Cummertrees. Spottiswoode says “it was anciently used as a beacon ; and the Border Laws direct a watch to be maintained there, with a fire-pan and bell, to give the alarm when the English crossed the river Annan.” The traditionary tale regarding its origin is that it was built from the stones of a ruined chapel in the fifteenth century by the then Lord Herries —“Herries o’ the Thwaite” (a noted reiver)—as an outward token of penitence and remorse. The Tower stands in the centre of a small churchyard, now old and unused, in which are a number of curious inscriptions. Near to the Tower is a large enclosed burial-place belonging to the family of Murray of Murraythwaite. A Business Meeting was held here, after which Dr Gilchrist gave a brief address on the geology of the district. Descending from the hill, the party were kindly entertained to a refreshing cup of tea by Miss M. Carlyle Aitken, of The Hill, niece of Thomas Carlyle. The tea was prepared and partaken of in the house of Mrs Graham, Hoddam Mains, obligingly placed at the disposal of the party. After a brief visit to Hoddam Castle gardens and a little out-of-the-way burial-place in the centre of a field a short distance from the Castle, the party resumed their seats in the vehicles, and in a short time reached the churchyard of Eccle-

fechan, where a few minutes were spent at the grave of Thomas Carlyle. Near to the resting-place of the great seer is the tomb of "Robert Peal" (the reputed grandfather of Sir Robert Peel), who "died April ye 4th, 1749;" and many other distinguished sons of Annandale are interred here. Proceeding next to the village, a visit was paid to the little house in which Carlyle was born; and before leaving Ecclefechan a number of the party made the acquaintance of Mr Graham, the genial postmaster, by whom they were shown a number of interesting letters from Lord Nelson to Mr Graham's grand-uncle, Dr Thomas Graham, who was assistant-surgeon on board the same ship in which Nelson was a "middy"—probably the *Seahorse*. Dr Graham, who was drowned at Liverpool, was one of the founders of the Athenæum Library there. Mr Graham also shewed the company a curious old pistol, which is supposed to have belonged to Lord Nelson. Dr Graham at one time obtained a brace of pistols from the Admiral, and it is thought probable that this may be one of them. There is a small plate on the side with the inscription "Parks & Co.," and the pistol is so constructed that by a spring a dagger shoots out under the barrel. Leaving Ecclefechan at half-past five, the party returned *via* Lockerbie and Lochmaben, arriving in Dumfries at nine o'clock.

The following Plants were found during the day: *Ranunculus flammula*, *Papaver rhœas*, *Fumaria officinalis*, *Polygala vulgaris*, *Vicia angustifolia*, *Spergula arvensis*, and *Conium maculatum* (hemlock), which was very abundant near Repentance Tower. *Comarum palustre*, *Menyanthes trifoliata* (bog-bean), *Galium palustre*, and *G. uliginosum*, at the small lake near to Hoddam Castle. *Galium saxatile*, *Silene inflata*, *Hypericum perforatum*, *H. pulchrum* (not yet in flower), *Reseda luteola*, *Scrophularia nodosa*, at Ecclefechan. *Orobus tuberosus*, *Euphorbia peplus*, *Sedum acre*, *S. telephium*, *Callitriche verna*, *Linaria vulgaris*, *Epilobium montana*, *E. palustre*, *Lonicera perichlymenum*, *Jasione montana*, *Pyrola minor* (rare), *Orchis masculata*, *Habenaria bifolia*, and *Listera ovata*, along the road side. Saw *Linaria cymbalaria* growing at the gateway of Hoddam Castle, and *Iris pseudacorus* in full bloom in the Lochar Moss.

CARLINGWARK LOCH AND THREAVE CASTLE.

4th August, 1883.

The August field meeting comprised an excursion by rail to Castle-Douglas, a pleasant sail on Carlingwark Loch, and a visit to the interesting ruins of Threave Castle. Only a dozen members attended, but, favoured with fine weather, the meeting proved an enjoyable one. They were met at Castle-Douglas by Mr J. H. Maxwell, the genial editor of the *Kirkcudbrightshire Advertiser*, who kindly accompanied the party, and supplied each of them with a copy of his "Guide to the Stewartry." Carlingwark Loch was first visited. The loch, which is nearly a hundred acres in extent, is beautifully studded with a number of small islets, and occupies a picturesque situation. It has also yielded up many antiquarian relics, and was much prized as a field for research by the late Mr Joseph Train, the well-known antiquary. A boat having been engaged, the party proceeded to the Fir Island, the largest of the group, which is said to have been used by Edward I. as a place for shoeing his cavalry horses, when he made his way in 1300 to the wilds of Galloway—a traditionary tale which is supported by the supposition that there used to be a road from the margin of the loch to the north-east of the island, by the fact that horse-shoes of an old-fashioned character and similar deposits have been repeatedly found in the bed of the lake, and by the further fact that until recently what were supposed to be the remains of an old forge were visible on the island. An object of curiosity here is a small memorial purporting to have been erected in March, 1863, "to the memory of Prince, for twelve years the faithful and attached dog of Lady Abercromby of Birkenbog;" and on the top of the stone is sculptured a bas-relief image of her ladyship's favourite pet. A rare specimen of *Ranunculus Lingua* was found on the island by Miss Gillies. The name of the lake is a compound of two old British words—*caerlin*, a fort lake, and *wark*, a castle—and its application is explained by the story that a town was sunk in the loch, and that churches once stood on two of the islands. Near to the lake is the place known as "The Three Thorns of Carlingwark," where James II. assembled his men for the siege of Threave Castle. Three thorn trees used to mark the spot, but they have all perished from old age, the last one having fallen a few years ago. After a brief visit to the garden of Mr

James Lidderdale, to which they were kindly invited by Mrs Lidderdale, the party directed their steps towards Threave Castle. The site of this venerable pile is an island formed by the river Dee, formerly occupied by a fortalice belonging to Alan, the last native Prince of Galloway; and the building material is said to have been brought from the old Abbey of Glenlochar, which was about a mile and a half distant. The precise date of its erection is unknown, but it is supposed to have been in the fourteenth century, and Archibald Douglas the Grim is its reputed founder. The castle, which has been of three storeys, consists of a tall oblong square tower, the walls of which are about 70 feet high and 8 feet thick, and surrounded by the remains of a barbican flanked with a circular tower at each corner, one of which is still almost complete. The entrance is on the east side, the doorway, which is on the level of the second storey, being approachable at one time by means of a drawbridge which spanned a deep fosse. Over the entrance a small granite block projects from the wall. This is called the "Gallows Knob" or "hanging stone," where the unhappy vassal, who had offended his lord, was "tucked up" to pay the penalty with his life; and near to Carlingwark Loch was a charnel, known as the "Gallows Slot," into which the lifeless bodies were afterwards unceremoniously thrown. William, eighth Earl of Douglas, kept a retinue at Threave of about 1000 armed men, and conducted his household with regal splendour. When the Act of Forfeiture was passed against the King's enemies in 1455, Threave was the last stronghold that held out, and King James conducted the siege himself. It was for this, it is said, that the ponderous piece of ordnance known as "Mons Meg" was forged by a blacksmith named M'Kim, who with his seven sons carried on his trade at Buchan's Croft, a hamlet in the neighbourhood. The "gunstones o' the granite grey" with which the cannon was charged were disastrously effective; and the garrison soon surrendered. For his part in the victory M'Kim, says tradition, received the lands of Mollance, and it is to a contraction of this word and the familiarised Christian name of his wife, that some attribute the name "Mons Meg." The gun, which now occupies a position on the bastion of Edinburgh Castle, bears by an inscription on the carriage to have been forged at Mons, Flanders, which shews that the traditionary tale is discredited; but there is still a general belief in its Galloway origin, which is strengthened by the fact

that a ball corresponding to Meg's "meikle mou" was excavated at the Castle at a comparatively recent date, and that this and the other balls at Edinburgh are apparently of Galloway granite. After a short Business Meeting, the party returned to Castle-Douglas, and left for Dumfries with the 4.47 train.

The following is a list of the plants found :—*Ranunculus Flammula*, *R. Lingua* (rare), *Nymphæa alba*, *Nuphar Lutea*, *Nasturtium palustre* (rare), *Alisma plantago*, *A. ranunculoides*, *Potamogeton heterophyllus*, *P. perfoliatus*, *P. Crispus*, at Carlingwark Loch. *Galium Verum*, *G. saxatile*, *G. mollugo*, *G. palustre*, *G. uliginosum*, *Hypericum perforatum*, *H. humifusum*, *H. pulchrum*, *Antirrhinum majus*, *Agrimonia Eupatoria* (not common), *Genista tinctoria* (rare), *Sherardia arvensis*, *Lythrum salicaria*, *Stachys Betonica* (rare), *S. palustris*, *Teucrium Scorodonia*, on the way to Threave Castle. *Lobelia Dortmanna* (rare), *Menyanthes trifoliata*, *Potamogeton natans*, *Helosciadium inundatum*, *Carum verticillatum*, and *Juncus obtusiflorus* (very rare), in wet places and the river Dee near the Castle.

CORSOCK.—1st September, 1883.

The fifth and last excursion of the summer season took place to Corsock, when a party of twenty-two ladies and gentlemen set out in two waggonettes at ten o'clock. Though the morning was dry and sunny, there were yet indications of impending rain, in a lowering barometer and the glistening state of the atmosphere; and before the day was far advanced showers began to fall, and continued at intervals to do so. This interfered with the work of botanical exploration. The woods and meadows were too wet, and the showers too frequent, for the botanists to venture far a-field. But in other respects the outing proved to be a most enjoyable one. Some pretty bits of little-frequented country were seen as the party drove along, and one or two places of interest were visited.

At the village of Crocketford—the Nine-Mile Bar, as it used to be called—a halt was made, and some information obtained respecting that curious sect of religious fanatics, the Buchanites, who founded the village, and died and were buried there, though

the distinctive idea of their creed was a profession that they should never taste of death, but be lifted up bodily and alive into the New Jerusalem. The leader of this "peculiar people," Lucky Buchan, shared the common lot on the 29th of March, 1791; but it was not until half a century afterwards that all hope was abandoned by the last surviving of her followers of her miraculous ascension, and her remains were committed, "dust to dust," to the keeping of the grave. Though a sadly deluded community, the Buchanites were kindly, inoffensive, and industrious. As wheelwrights and spinners they established the work of their hands in the South of Scotland. It was they who introduced the two-handed spinning-wheel; and they obtained as much employment as they could address themselves to in spinning linen yarn for the well-to-do families of the neighbourhood. They possessed their goods in common; lived peaceably and "beinly" together; and were not without hope when the end came and they fell asleep in death.

This and the neighbouring parishes were the theatre of much black business in the time of the persecution. On the bleak, stony ridge of Larghill a rough obelisk of grey granite was seen, and ascertained to be a monument to the Covenanters, who were shot on the adjoining moor of Lochankit. The grave of the martyrs is on the moor itself, and over it a tombstone bears the following inscription:

"Here lies 4 Martyrs, John Wallace, Wm. Heron, John Gordon, and Wm. Stewart, found out and shot dead upon the place by Captain Bruce and Captain Lag, for their adhering to the Word of God, Christ's Kingly Government in His House, and the Covenanted work of the Reformation against Tyranny, Perjury, and Prelacy.

2nd March, 1685.

Rev. chap. xii. v. 2.

Behold here in this wilderness we lie,
Witnesses of hellish cruelty;
Our lives and blood did not their ire assuage,
But when we're dead they did against us rage,
That match the like we think ye scarcely can,
Except the Turk or Duke de Alva's men."

There were in all six Covenanters captured by Bruce on Lochinkit Moor. Nicholson says this occurred on the 19th February, 1685, and that four of them were at once ordered to be shot. Two others, Alexander M'Robin or M'Cubbin and Edward Gordon,

were carried by him to the Bridge of Urr, where Grierson of Lagg was administering the abjuration oath. Bruce desired that his prisoners should be formally found guilty by a jury; but Lagg was impatient of ceremony, and next day he had them conveyed to Irongray, where they were hung on an oak tree, and buried at the foot of it. Over them there is a tombstone with the following inscription:

“Here lyes Edward Gordon and Alexander M‘Cubbine, martyrs, hanged without law by Lagg and Captain Bruce, for adhering to the Word of God, Christ’s Kingly Government in His own House, and Covenanted work of Reformation against Tyranny, Perjury, and Prelacy, Rev. xii. 2, March 3d, 1685.

As Lagg and bloodie Bruce command,
 We were hung up by hellish hand;
 And thus their furious rage to stay,
 We died near Kirk of Irongray.
 Here now in peace sweet rest we take,
 Once murdered for religion’s sake.”

Mr Harper mentions that the fine engraving, by Mr B. Scott, of a picture by Thomson of Duddingston, designated “Martyrs’ Tombs in the Bog of Loch-in-Kett, Galloway,” represents in reality the Martyrs’ Grave at the Caldons, Glen Trool, and that the engraving has in some unexplained way been therefore misnamed.

At Corsock Manse a cordial reception awaited the party at the hospitable hands of Mr and Mrs Sturrock. Rain had been falling for half an hour before the Manse was reached, and the shelter was therefore no less welcome than the substantial repast, which was immediately partaken of. Disappointing to the visitors, the weather was equally so to the young people at the Manse; for arrangements had been made by them to entertain the company at lawn tennis, croquet, football, &c., and it was with no little reluctance that these instruments of outdoor amusement had to be abandoned. Leaving the Manse, with a pressing invitation clinging to them to return for tea, the party proceeded to Corsock House, the residence of Mrs Murray Dunlop, who had, when asked, kindly consented to throw the grounds and gardens open, and to place the boat at the service of the Society to navigate, if desired, the loch. Mr Croal, gardener, who accompanied the party, was most obliging in his information, and afforded no little entertainment by the raciness of his historical narrative and interesting bits of folk-lore.

Corsock House, though not of yesterday, is the modern representative of a much older structure—the Castle of Corsock, crumbling vestiges of which still remain on the farm of Hallcroft, and an armorial stone from which, with the initials “J. N.” and “M. G.” (John Nelson, namely, and his wife Margaret Gordon), is built into one of the walls of Corsock House. The Nelsons of Corsock, like their relatives the Gordons, were devoted adherents to the cause of the Covenant, and suffered much and long for their fidelity to the Presbyterian Church of the Reformation. When the Rev. Gabriel Semple was ejected from Kirkpatrick-Durham, he found a refuge in Corsock Castle, where he preached regularly to increasing congregations of eager hearers. Mr Nelson became a marked and obnoxious man for this, and for other conduct of his, and was made to suffer severely in his means. He was concerned in the rising which occurred after the affair at Dalry, and ended disastrously at Rullion Green; and he and John Gordon of Irongray were tried in Edinburgh, and condemned to be hung, a sentence which would have been averted probably by Sir James Turner, whose life had been saved by the intercession of Nelson when Sir James was seized by the Covenanters in Dumfries, but for the stern counter-plotting of the Rev. Mr Dalgliesh, the Episcopalian curate of his parish, who represented him to the bishops as the very ringleader of the disaffected, and urged the necessity of his execution, “for the sake of example and the establishment of peace.” On the 14th of December, 1666, after having been tortured by the “boot,” Mr Nelson was hanged accordingly at the Cross of Edinburgh.

On a green hill top near Corsock House there stands a chaste granite obelisk, erected to the memory of the late Mr Murray Dunlop, who was for many years an influential member of Parliament for Greenock, who espoused the cause of the Non-Intrusion party, who was afterwards the trusted legal adviser of the Free Church, who was respected by opponents and revered by friends, and of whom the late Lord Cockburn said—“Calm, wise, pure, and resolute, no one ever combined more gracefully the zeal of a partizan and the honour of a gentleman.” The monument on the height was erected by his sorrowing tenantry.

The party were received at Corsock House by Mrs Murray Dunlop, and shewn a number of interesting articles recently brought from Egypt by her son, including three large and hand-

some mosque lamps, some curtains in bright-coloured cottons, carpets, pottery formed of the mud of the Nile, and trays and vases of Damacene work and Benares brass.

Returning to the Manse, the party again partook of the hospitality of Mr and Mrs Sturrock, to whom, on the motion of Dr Gilchrist, president of the Society, a hearty expression of thanks was conveyed. Shortly afterwards the waggonettes drew up, and the party left for Dumfries, which was reached about eight o'clock, and without much rain having been encountered on the way. When, some years ago, the Society formerly visited Corsock, the weather was very similar to that of Saturday; but on that occasion as on this the hospitality of the Manse did not fail, and feelings of regret for lost opportunities in scientific exploration were supplanted by a sense of social enjoyment.

The botanical finds were not numerous. But in the walk through the woodland to the loch, the ground was seen to abound in very fine fungi and lichens, some of the rarer sorts of which were picked up by Dr Gilchrist. The following note from Dr Anstruther Davidson, Thornhill, was received:—The heavy rain which fell during the afternoon prevented the botanists of the party from exploring the glen and adjoining woods. In Corsock wood, however, Mr Chrystie, Dumfries, collected specimens of *Lysimachia ciliata*, a North American plant, mentioned in the Floras as having established itself in Cumberland and near Dumbarton; in this case doubtless a garden escape. Amongst the less common plants observed near Corsock House may be mentioned *Meum athamanticum* and *Arctium majus*. On the edge of the loch were gathered *Scutellaria galericulata* and *Alisma ranunculoides*, and in the loch itself *Nuphar lutea*, *Nymphaea alba*, *Potamogeton crispus*, *P. obtusifolius*, and *Chara flexilis*.

INTERMEDIATE LECTURES.



DUMFRIESSHIRE & GALLOWAY
SCIENTIFIC, NATURAL HISTORY, AND
ANTIQUARIAN SOCIETY.

INTERMEDIATE LECTURES.

17th November, 1882.

Dr GILCHRIST in the chair. Thirty-nine present.

The first of the intermediate course of lectures was given to-night by the President, Dr Gilchrist, the subject being "Nature's Tiny Workmen." The lecturer briefly summarised his communication to the Society of the 3rd inst., and proceeded to describe the life and habits of some of the coral polypes, and clearly explained the formation by them of atolls, barrier reefs, and fringing reefs. Passing from these he described the formation of the carboniferous series of rocks, their extent, and the numerous fossils which they contain, with especial reference to the corallines. The lecture was illustrated by several diagrams and numerous specimens of corals and corallines.

15th December, 1882.

Dr GILCHRIST in the Chair.

Mr Rutherford of Jardington gave a very interesting lecture on "Atmospheric Electricity," illustrated with a number of beautiful experiments.

19th January, 1883.

Dr GILCHRIST in the Chair.

Mr Armistead of the Solway Fishery delivered a most instructive lecture on "Fish and Fish Culture," with a fulness and

freeness possible only to one who, like himself, has made the subject a special study and practical pursuit. After giving some account of the fish culture of the ancients, Mr Armistead spoke of the many rivers, lakes, and ponds, especially in the northern part of Great Britain, which, if properly managed, could be made to produce much more than the same extent of land. Referring to the previous plenteousness of fish and the present scarcity, he remarked that "many rivers which thirty years ago were teeming with fish had not one in them now. They were as black as ink with sewage and the poisonous chemical wash of manufactories." "What," he went on to say, "is wanted to increase our salmon supply is cultivation, not restriction. It is the opinion of Professor Huxley that fishermen should be allowed to catch fish when they like, how they like, and where they like. He could not go the whole length of that; but such a change in the law might be safely made if cultivation was what it ought to be." In comparing artificial with natural hatching, the lecturer stated that not one egg in a hundred in the natural condition produced a fish, whereas by the artificial process as many as 100 per cent. of eggs had been successfully hatched, and the loss certainly never ought to exceed 20 per cent.. The importance of protecting and feeding fish was also explained. In speaking of reproducing with a sea trout and burn trout, the lecturer gave it as his opinion that they would reproduce, and he mentioned that Professor Day was of opinion that sea trout, *salmo trutto*, would in the end prove to be a sea going variety of the common trout, *salmo faro*. After discussing the natural and artificial impregnation of the ova, its progress in hatching, crippled fish, and diseases of fish, Mr Armistead concluded his highly interesting lecture by exhibiting some of the troughs used in the artificial hatching of fish.

16th February, 1883.

Mr J. WILSON, Vice-president, in the Chair.

Dr Grierson, Thornhill, delivered a lecture on "The Brain and Nervous System." The lecturer, who spoke without notes, discoursed in an easy conversational style, and treated his subject in a most lucid manner. He gave an account of the provision that has been made for the security of the great nervous centres, viz., the brain and the spinal cord—the structure of the skull and the

vertebra being fully described. The head of a sheep was dissected, and as the brain was being removed the names of its various parts were given, as well as of the nerves proceeding from it. It was afterwards compared with a human brain, which was preserved in spirits, and also with those of the horse and monkey. The nearest approach to the human brain, he said, was certainly that of the monkey, and he added that there is more difference between the brain of the cat and the monkey than between the monkey's and man's. After considering the substance of the brain structure, and offering some observations on mind and matter, Dr Grierson brought his highly instructive lecture to a close by remarking "that although much had been learned there remained a vast deal yet to be known respecting the brain and the nervous system, and in preference to much of the theory of the moderns, he was disposed to accept many of the speculations of the philosophers of former times."

16th March, 1883.

Dr GILCHRIST, President, in the Chair. Forty-three present.

Mr J. Wilson delivered an instructive lecture on "A Cup of Tea." The lecturer, after giving an interesting sketch of the history of tea, from its introduction into the Celestial Empire in the fifth century to the present time, described its botanical characteristics and the modes adopted in picking and preparing the different teas of commerce. He went fully into the chemical properties of tea, describing the effects produced by the constituents on the system, and also the various adulterants which were formerly mixed with the leaves. Having considered the different ingredients in "the cup of tea," he showed how to make it to the best advantage, and concluded by saying that when properly made it was an agreeable and stimulating beverage; but if taken in excess, at irregular intervals, or without sufficient food, it produced deleterious effects. The lecture was illustrated by samples of the different kinds of tea, microscopical drawings of various leaves, and numerous chemical experiments, showing the properties of the respective constituents.

20th April, 1883.

MR RUTHERFORD, Secretary, in the Chair.

LOCHMABEN CASTLE.

The sixth and last of the course of lectures was given by the Rev. W. Graham, Trinity, Edinburgh, his subject being "Lochmaben Castle: Its Past, Present, and Future." Mr Graham, in the course of his remarks, gave some interesting particulars which are not generally known. After referring to its earlier history and other circumstances connected with its recent demolition since the close of last century, he touched specially on the hereditary keepership of the Castle. The hereditary keeper is Capt. Hope-Johnstone of Annandale, a descendant of Wallace, through David Halliday's daughter, a niece of Wallace, marrying Johnstone, its hereditary keeper. This is told by *The Minstrel*, book 5th. Wallace, accompanied by Græme, took the Castle from the English in 1304. Wallace proposed to Græme to take the Castle, and Græme agreed. When about a mile from the Castle, in the Smallrigg direction, the night being dark, a consultation was held. Wallace said to his brother-in-law, Halliday, "Methinks thou knowest this country best. I hear no noise of folk." Halliday said, "I will take ane wi' me and ride before to let ye see the way to the Castle." At length they reached the Castle gates. Halliday asked the porter to open, he having some acquaintance with him as a neighbour, though his aim he said was to do the English ill. John Watson, the porter, opened the gate. John Halliday "soon by the craig him threw," and with a knife "sticked him dead." Wallace and Græme then entered, taking the keys out of the dead porter's hands, and slew all excepting the women and children. They examined the Castle next morning, and sent for "Johnstone, a man of greate degree," and made him the "captain of that place." After that Græme and Wallace left the Castle for the Corehead and Crawford Castle by Kirkpatrick and "Aisdail Woddis." This was the story of the taking of Lochmaben Castle by Wallace and the Græme, and the appointment of Johnstone of Annandale the full captain keeper, in whose family directly or indirectly it has remained from that time till now.

"Within the bounds of Annandale the gallant Johnstones ride;
They have been here a thousand years, and a thousand more
will bide."

About two centuries ago Charles II. granted the keepership to Johnstone, Earl of Annandale, with all its rights and privileges. That was by charter after the death of Murray, Earl of Annandale. Prior to that James VI. (15th January, 1610) granted a feu charter to the Earl of Dunbar of the whole of the four mains. The Earl was by the same charter constituted steward of Annandale and hereditary keeper of the Castle of Lochmaben, with parts and pertinents pertaining to the guardianship. By the same deed the foresaid lands and subjects were for the first time erected to the barony of Lochmaben. The feu duty was then declared for the lands; but a red rose, to be presented on midsummer day at Lochmaben Castle, was the price the keeper had to pay to the Crown; so that if Queen Victoria visited the Castle, Captain Hope-Johnstone would acknowledge her sovereignty in the Castle, within the gates thereof, by presenting Her Majesty with a red rose. The Earl of Dunbar, immediately before his death, sold the whole (stewardship and office of keeper) to John Murray, afterwards Earl of Annandale, in whose favour James VI. (1st July, 1612, two years after the Earl of Dunbar's charter) granted a new charter, whereby His Majesty disposed to the Earl of Annandale (Murray) "The Castle, Castellany, and Castle lands of Lochmaben, and assessed £40 13s 4d Scots and a number of oxen 'as fee and duty' for repairing the said Castle of Lochmaben"—the lands being anew erected into the barony of Lochmaben. Those charters were ratified in 1612, and again in 1621. By both of these Acts the lands and barony were again dissolved and disunited from the Crown. Another charter of a subsequent date in favour of David (Lord Stewart), who married the widow of the second Earl of Annandale of that period, was also ratified in 1669. Thus the right to the lands of the barony was finally separated from the Crown, and was vested in Lord Mansfield, a vassal of the Crown, and of the hereditary keeper's representatives of the Earl of Annandale, a modern proof of which separation from the Crown was that since 1839 the king's kindly tenants pay stipend to the minister of Lochmaben parish. But the Castle within the gates thereof still exists for behoof of the Queen and her royal successors, paying neither stipend nor taxes, all Crown lands being exempt from the same. In 1647 the second Earl of Annandale granted a perpetual lease of the mains of the Castle to Bailie John Henderson, Lochmaben, but reserving from

the tack the Castle within the gates thereof. The land came by marriage into the possession of Johnston of Thorniewhat, a vassal of the Annandale family. Johnston of Castlemains and Thorniewhat became insolvent about 1795-96, and those mains of the Castle were sold. The advertisement advertising the sale stated that the Castle within the gates thereof was reserved. In 1839 the present Captain Hope-Johnstone's grandfather got all his titles renewed 20th December, conferring on him anew the keeping of the Castle of Lochmaben. The Latin words were—“*Una cum hereditable officio custodiendi et gubernandi nostrum castrum de Lochmaben.*” All doubt, therefore, as to the present Captain Hope-Johnstone being the hereditary keeper of “the Castle within the gates thereof” is completely removed by the title being renewed to the same so recently as 20th December, 1839, Lord Mansfield being its guardian and watcher. Coming now to Lochmaben Castle in the present and future, he mentioned that in consequence of a letter which he had written to the Woods and Forests, in compliance with the desire of the inhabitants of Lochmaben, on the subject of the neglected state of their venerable Castle, it has since been protected from horses and cattle straying within its sacred precincts by a strong wooden railing from Raehills woods, with three gates opening into the Castle, and that the walls were then covered with ivy and the loose stones gathered together in places by themselves at the foot of the walls:—

Office of Woods, etc., S.W.
9th November, 1874.

SIR,—I am directed by Mr Howard to acknowledge the receipt of your letter of the 31st ultimo, addressed to Mr Bellairs, on the subject of the ruins of Lochmaben Castle, County Dumfries, and in reply I am to state that while fully agreeing with you as to the historical interest which attaches to the remains of the Bruce Castle, Mr Howard regrets that it is not practicable that this Department should interpose with the view of preserving what remains of the Castle from further destruction—you refer to some eight or twelve acres of excellent pasture—and some valuable trees as included within the Castle precincts, but Mr Howard presumes that all the land which is available for cultivation or produce of any kind is occupied, and that the premises are held and enjoyed by the hereditary keeper. It occurs to Mr Howard that the preservation of the ruins is an obligation which should be attached to the hereditary keepership, but whether this is so or not the preservation of the Castle of Lochmaben appears to be a matter in which the adjoining neighbourhood is principally interested, and in any case it is one which seems to concern the Department of Public Works and Buildings rather than this office.—I am, sir, your obedient servant,

J. BENNET SOWRAY.

The Rev. Wm. Graham.

The Castle Loch being within the burgh boundary, the inhabitants

have placed boats on the same—a great attraction to strangers, and a source of increasing amenity to the burgh. To increase its attractions Captain Hope-Johnstone, the keeper of the Castle, has asked the Town Council to supervise the cleaning out of the inner fosse in the interests of science, in the hope of procuring ancient relics, and also to allow of boats passing through it, as formerly the Brucian barges and other boats did, till the period of the destruction of the Castle from A.D. 1792 to A.D. 1800, or thereabouts. To help to pay the expense of clearing out the inner fosse, Lord Bute, who has done so much for clearing out Rothesay Castle, had sent him £5; and were Dumfriesshire friends, interested in historical and antiquarian research, willing to co-operate in a kindly and patriotic spirit for the public good, that might be easily accomplished without injury to a single stone of the ruin, and form an object of additional historic and antiquarian interest in Dumfriesshire. Of the desolate state of the Castle now compared with what it was in its entire state in 1790, when enclosed by its outer trench on a peninsula of the Castle Loch, extending to about fifty acres, one could hardly imagine the vandal spirit abroad at the end of last century which destroyed many of its architectural beauties. But for the ill health at that period of the keeper of the Royal Castle this almost impregnable fortress might still have remained entire. Still, though desolate, its ruins told of its ancient greatness, though weeds and nettles grew in its halls, and sedges filled some of its fosses; its ruined walls, especially by autumn moonlight, produced a picturesque effect. To visit the Castle under such circumstances was a gratification worthy of the painter, the poet, or the lover of nature. The Castle Loch was of itself a scene of beauty, with its rare vendace sporting in its waves, and the remainder of an old lake-dwelling under the shadow of the Castle walls, partly explored, but still further to be explored in search of some of the utensils used by its inhabitants, such as awls, bodkins, picks, spoons, plates, combs, bones of reindeer, horse and sheep, bronze weapons, remains of spear heads, and rings of gold, all of which had already been found in the lake dwellings of the iron age in the later British or the later Celtic or earlier Roman times, in other parts of Scotland and in Switzerland.

On the motion of Mr Wilson, seconded by Mr Watson, a vote of thanks was accorded to Mr Graham for his able paper, and the meeting terminated.

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CRYPTOGAMIC SOCIETY OF SCOTLAND.

The Ninth Annual Conference of the Cryptogamic Society of Scotland was held in the Greyfriars' Halls, Dumfries, on Tuesday, Wednesday, and Thursday, 11th, 12th, and 13th September, 1883. Owing to the President of the Natural History Society (Dr Gilchrist) having been elected President of the Cryptogamic Society for the ensuing year, and the necessary arrangements for the Conference and Exhibition having been made by the Committee, who acted for the time as the Local Committee of the Cryptogamic Society, it is desirable that notice of the Conference should be recorded in these Transactions.

Some time prior to the date of Conference the Local Committee issued circulars to all the landed proprietors in Dumfriesshire and Galloway, requesting that instructions might be given to their gardeners and gamekeepers to gather cryptogamic plants and forward them to the hall for exhibition. A liberal response was made to the circulars, and when the time arrived a supply of Fungi, &c., came to hand sufficient to fill the large hall, which had been reserved for them. The small hall was occupied with dried specimens of Mosses, Lichens, Ferns, Salt and Fresh Water Algæ and Fungi, and all the available space (even the walls) was crowded with these. In the large hall, in addition to the Fungi, there were representative specimens of all the local and British Ferns, including many varieties; a large collection of Seaweeds, and about 100 specimens of Mosses and Hepaticæ growing in pots, which presented on the whole a most curious and interesting exhibition. The walls of this hall were also covered with dried specimens of Ferns and Water-colour Drawings (by Mrs Gilchrist Clarke) of all the edible Fungi.

Meetings of the Society.—On Tuesday, the 11th, the members and associates, about twenty in number, assembled at the Dumfries station in time to meet the 9.30 A.M. train for Dalbeattie. On arrival at the latter station, they were met by W. H. Maxwell, Esq. of Munches, who had invited the Society to visit his domains. The party having “fungi-hunted” along the hills and dales, through woods and fields, arrived at the Munches about 3 P.M., where

they were received by Mrs Maxwell and most hospitably entertained. After visiting the well-stocked gardens and hot-houses, they returned to Dumfries by the five o'clock train, having had a most enjoyable excursion. At seven o'clock the same evening a private meeting of the Council was held, and at 7.30 a private business meeting of the Society. At eight o'clock there was a public meeting, held in the small hall, when about 100 ladies and gentlemen were present, and Dr Gilchrist presided. The proceedings were opened by the presidential address from the Chairman, the subject being "Fossil Cryptogams." After the address and election of new members, communications on the following subjects were read:—"Notes on Scottish Uredineæ," by Professor J. W. H. Trail; "Heterocism of Leaf Fungi," by R. Turner, Esq.; "Remarks on the Fungus of the Potato Disease (*Peronospora Infestans*)," by T. King, Esq. On Wednesday, at 2 P.M., the Exhibition was opened by an address from Sheriff Hope, vice-president, on the "Aims and Claims" of the Society. At 5 o'clock the Annual Dinner of the Society was held in the King's Arms Hotel, when 33 gentlemen sat down to table. At seven the Exhibition was re-opened, and considerable advantage was taken of it by the public. On Thursday the Exhibition was open from 10 A.M. to 10 P.M. At intervals during the time the Exhibition was open, several ladies played selections on the organ and piano-forte. On Thursday morning the members of the Cryptogamic Society were entertained to breakfast by Dr Gilchrist. At 11 o'clock a party assembled at the King's Arms Hotel and proceeded in two waggonettes to Caerlaverock and Comlongan Woods, by way of Glencaple, and returned by Clarencefield. Another party went to Shambellie Wood and Newabbey.

On one of the tables in the exhibition hall, the Fungi were named and arranged according to their families by the Rev. James Stevenson of Glamis and Rev. Mr Paul of Roxburgh. The Lichens and Mosses were named by Dr Stirton of Glasgow. Among the specimens sent to the exhibition hall may be noticed *Lithographa Andrewii*, a lichen discovered by Mr M'Andrew, and named in honour of him. Of the Fungi:—*Hydnum gelatinosum*, not previously recorded from this country; *Agaricus Valhii*, *Agaricus virosus*, *Polyporus sulfureus*, *Polyporus dryadens*, *Polyporus betulinus*, and a huge specimen of *Polyporus giganteus*. The following Cryptogams were gathered during the excursions:—

Lecidea canescens and *Peltigera horizontalis* (lichens); *Barbusta papillosa* and *Trichostomum mutabile* (mosses); and *Lactaricus deliciosus*, that "epicurean treasure," in abundance.

The following gentlemen formed the Council and Local Committee:—*Council*—President, Dr Gilchrist, President of Dumfries and Galloway Scientific, Natural History, and Antiquarian Society; Vice-president, David Boyle Hope, Esq., Sheriff-Substitute, Dumfries; Hon. Secretary, Dr Buchanan White, F.L.S., Annat Lodge, Perth; Hon. Treasurer—Rev. J. Stevenson, Glamis. Professor J. W. H. Trail, F.L.S., Aberdeen; Rev. Dr Keith, Forres; M. C. Duff, Glasgow; Dr Stirton, F.L.S.; J. Richardson, Glasgow; J. Stewart, Glasgow; T. King, Glasgow. *Local Committee*—Chairman Dr Gilchrist, Dumfries; Secretary, J. Rutherford of Jardington, Dumfries; Treasurer, J. Wilson, 3 Norfolk Terrace, Dumfries. J. M'Andrew, New-Galloway; W. Lennon, Dumfries; G. Robb, do.; J. Watt, do.; P. Stobie, do.; J. Neilson, do.; T. Watson, do.; J. M'Meekan, do.; James Lennox, do.; S. A. Chrystie, do.; W. Adamson, do.

The Conference on the whole was a great success, and afforded great pleasure to the "strangers," who were thoroughly satisfied with the arrangements and to visitors, some of whom had their "eyes opened" for the first time to the beauties of puff-balls and paddock-stools.

"There's a soul of goodness in things evil,
Would men observe it, and distil it out."



A P P E N D I X A.

LIST OF MEMBERS OF THE SOCIETY, AUGUST, 1884.

(Those Members who joined the Society when it was re-organised, November 3rd, 1876, are indicated by an asterisk.)

LIFE MEMBERS.

Date of Election.

- March 3d, 1884—Maxwell, W. H., Esq. of Munches, Dalbeattie.
May 3d, 1884—Johnstone, J. J. Hope, Esq. of Annandale, Raehills,
Lockerbie.
June 7th, 1884—Stewart, Mark S., Esq. of Southwick House, Dumfries.

ORDINARY MEMBERS.

- *Adair, John, High Street, Dumfries.
Febry. 2d, 1883—Adams, James, High Street, do.
*Adamson, William, Broom's Road, Dumfries.
Jany. 5th, 1883—Aitken, Miss, The Hill, Dumfries.
Jany. 5th, 1883—Aitken, Miss M., do. do.
Jany. 4th, 1884—Aitken, John, Ravenshill, Lockerbie.
April 12th, 1882—Allan W., Chemist, High Street, Dumfries.
Dec. 1st, 1882—Anderson, W., Netherwood, Dumfries.
Dec. 1st, 1882—Armistead, J. J., The Fishery, Kinharvie, Dumfries.
Jany. 5th, 1883—Armstrong, Francis, Architect, Dumfries.
Oct. 6th, 1882—Bailey, W., *Courier and Herald* Office, Dumfries.
Dec. 7th, 1883—Baird, A., Marchbank Terrace, do.
Jany. 4th, 1884—Baird, Mrs, do. do.
Dec. 3d, 1880—Barbour, J., Architect, do.
Mar. 7th, 1884—Barbour, Robert, St. Christopher's, Dumfries.
Jany. 4th, 1878—Black, Charles, Arbigland, Dumfries.
Dec. 1st, 1876—Bowden, Major, Lochfield, do.
July 1st, 1882—Bridges, J., jr., Timber Merchant, Dumfries.
Mar. 5th, 1880—Broun, J. S., Solicitor, Dumfries
Jany. 5th, 1877—Browne, W. A. F., M.D., Crindau, do.
Nov. 3d, 1882—Brown, T., Public School, Ancrum, Roxburghshire.
April 1st, 1881—Brown, T., Auchenhessnane, Penpont, Thornhill.
Oct. 8th, 1880—Brown, J., Schoolhouse, Drumsleet, Dumfries.
Nov. 3d, 1882—Bruce, J., Crichton Royal Institution, do.
Febry. 7th, 1879—Bruce, T. Rae, Slogary, New-Galloway Station.
Febry. 2d, 1883—Burnett, Miss, 35½ Loreburn Street, Dumfries.
April 6th, 1883—Burnside, Miss, Buccleuch Street, do.
Mar. 5th, 1880—Byth, Mr, Academy, do.

Date of Election.

- Mar. 7th, 1884—Carnegie, D., Castlebank, Dumfries.
 Dec. 1st, 1882—Calderhead, R., Burgh Surveyor, do.
 Jany. 4th, 1878—Callander, John, High Street, do.
 Nov. 5th, 1880—Chinnock, Rector, Academy, Dumfries.
 April 4th, 1879—Chrystie, R., Buccleuch Street, do.
 April 4th, 1879—Chrystie, S. A., do. do.
 Oct. 6th, 1882—Chrystie, Miss, do. do.
 Mar. 5th, 1880—Clark, J. J., Irish Street, do.
 Nov. 2d, 1883—Clark, J., Schoolhouse, Lochmaben.
 Nov. 1st, 1881—Coles, F. R., The Hermitage, Tongland, Kirkcudbright.
 Mar. 1st, 1878—Copland, W. A. F. B., Nithsdale Mills, Dumfries.
 Mar. 7th, 1884—Craig, J. S., Solicitor, Dumfries.
 April 5th, 1878—Culton, J., Dildawn, Castle-Douglas.
 *Cunningham, Ur J., Dumfries.

*Davidson, James, Summerville, Maxwelltown.

- May 6th, 1882—Davidson, A., Kirkcudbright.
 Jany. 5th, 1883—Davidson, Dr A., Sanquhar.
 Nov. 11th, 1881—Dickson, H., Town Hall, Dumfries.
 Oct. 6th, 1882—Dickie, W., *Standard* Office, Dumfries.
 July 7th, 1883—Dinwiddie, R. (New York), Hawthorn Bank, Dumfries.
 *Dinwiddie, W. A., Greenbrae, Dumfries.
 Mar. 2d, 1883—Dodds, J. W., Sculptor, York Place, Dumfries.
 Nov. 11th, 1881—Douglas, W. D. Robertson, Orchardton, Castle-Douglas.
 Decr. 1st, 1876—Dudgeon, P., Cargen, Dumfries.
 Decr. 1st, 1882—Dunbar, W., High Street, Dumfries.
 July 1st, 1882—Duncan, Mr, *Amandale Herald* Office, Lockerbie.

- Nov. 11th, 1881—Edgar, I., Royal Bank of Scotland, Dumfries.
 Feby. 2d, 1883—Elder, J., Inaville, Maxwelltown.

- Decr. 3d, 1880—Fairley, J. D., Gold Coast, and Dumfries.
 Feby. 2d, 1883—Fenton, D., Dumfries.
 Oct. 6th, 1879—Fergusson, J., Artist, Queen Street, Dumfries.
 Jan. 5th, 1883—Fingland, Mr, Thornhill.
 Nov. 11th, 1881—Fisher, Robert, Bookseller, Dumfries.
 June 7th, 1884—Fotheringham, A. K., Corn Exchange, Dumfries.

*Gibson, W. G., Clerkhill, Dumfries.

*Gilchrist, Dr J., Linwood, do.

- June 2d, 1883—Gilchrist, Mrs do. do.
 Decr. 1st, 1882—Gillies, Miss, King Street, Maxwelltown.
 Oct. 6th, 1879—Gillespie, D. A., Queen Street, Dumfries.
 Mar. 2d, 1883—Gilroy, Miss, Moat House, Dumfries.
 Feby. 2d, 1883—Giltruth, F., Academy, Dumfries.
 Nov. 1st, 1878—Gracie, Thomas, Greenbrae Terrace, Dumfries.
 *Grierson, Dr, Museum, Thornhill.
 *Grierson, Dr F. W., Prince Alfred Hospital, Sydney, Australia.
 Jan. 6th, 1882—Grierson, W., Chapelmount, Maxwelltown.
 Oct. 6th, 1882—Grierson, J., Solicitor, Dumfries.

- April 6th, 1877—Halliday, W., College Street, Maxwelltown.
 April 6th, 1883—Hamilton, R., Castlebank, Dumfries.
 June 3d, 1882—Hamilton, G., Ardendee, Kirkcudbright.
 Nov. 2d, 1883—Hannah, James, Church Crescent, Dumfries.
 Jan. 4th, 1878—Harper, Malcolm M'L., Castle-Douglas.

*Hastings, W., Taxidermist, English Street, Dumfries.

Date of Election.

- July 7th, 1883—Henderson, Miss, 24 Castle Street, Dumfries.
 Feby. 3d, 1882—Herries, James, Gas Company's Offices, Dumfries.
 Feby. 1st, 1878—Hogg, James, Saughtree, Dumfries.
 *Hogg, W. S., Saughtree, Dumfries.
 Feby. 6th, 1880—Hope, D. B., Lovers' Walk, Dumfries.
 Nov. 2d, 1877—Houston, James, 9 Greyfriars' Street, Dumfries.
 Dec. 7th, 1877—Hutton, James, Ramsay Cottage, Maxwelltown.

 Decr. 7th, 1883—Innes, A., St. Ann's Place, Dumfries.

 Mar. 2d, 1877—Johnstone, G., Castlemilk, Lockerbie.
 Jan. 9th, 1880—Johnstone, Rev. J. B., Glebe Terrace, Dumfries.
 Decr. 1st, 1882—Johnston, J., Friars' Vennel, Dumfries.
 Decr. 1st, 1882—Johnstone, Miss, Catherine Street, Dumfries.

 *Kerr, Dr, Dumfries.
 Nov. 1st, 1878—Kerr, J. W., Academy, Dumfries.
 May 5th, 1883—Kerr, Mitchell, 55 Friars' Vennel, Dumfries.
 May 5th, 1883—Kirkpatrick, Miss, 120 High Street, do.

 Oct. 6th, 1882—Laidlaw, S. G., Bank of Scotland, Dumfries.
 Decr. 7th, 1883—Laing, T., Schoolhouse, Noblehill, do.
 July 1st, 1882—Laurie, J., Schoolhouse, Tynron, Thornhill.
 Jan. 5th, 1883—Laurie, W. J., English Street, Dumfries.
 Decr. 3d, 1880—Lawson, A., English Street, Dumfries.
 *Lennon, W., Brooke Street, do.
 Jan. 5th, 1883—Lennox, Provost, Dumfries.
 *Lennox, James, Edenbank, Maxwelltown.
 April 5th, 1878—Low, Mr, Chemist, Dumfries.

 Oct. 8th, 1880—Martin, W., Town Clerk, Dumfries.
 Jan. 4th, 1878—Matthewson, James, 18 Copland Street, Dalbeattie.
 *Maxwell, John, King Street, Maxwelltown.
 April 5th, 1878—Maxwell, J. H., *Kirkcudbright Advertiser*, Castle-Douglas.
 Oct. 6th, 1879—Maxwell, W. J., Terregles Banks, Dumfries.
 Feby. 6th, 1880—Maxwell, Captain, Terregles, Dumfries.
 Feby. 6th, 1880—Maxwell, E. C., do. do.
 Apr. 12th, 1882—Maxwell, J., Bookseller, High Street, Dumfries.
 Feby. 2d, 1883—Maxwell, Miss Agnes, Galloway Street, Maxwelltown.
 July 5th, 1884—Maxwell, Frank, Gribton, Dumfries.
 Mar. 23d, 1880—Miller, R. W., Queen Street, do.
 Feby. 2d, 1883—Milligan, John, Friars' Vennel, Dumfries.
 Nov. 2d, 1883—Montgomery, J., Rosemount Cottage, Maxwelltown.
 Nov. 2d, 1882—Montgomery, Mrs, do. do.
 *Moodie, James, David Street, Maxwelltown.
 Oct. 6th, 1879—Murdoch, N., Netherlea, Dumfries.
 Nov. 3d, 1882—Muir, Miss, Linwood, Dumfries.
 July 5th, 1884—Murray, Robert, George Street, Dumfries.
 April 6th, 1883—Murray, Mrs do. do.
 Feby. 2d, 1883—Murray, Miss, Dunbar Terrace, do.
 *Murray, Dr, Dumfries.

 Oct. 6th, 1879—M'Andrew, James, Schoolhouse, New-Galloway.
 April 6th, 1883—M'Cracken, Miss, George Street, Dumfries.
 *M'Donald, Dr, Castle Street, Dumfries.
 Nov. 11th, 1881—M'Dowall, W., *Standard Office*, Dumfries.
 July 2d, 1883—M'Fadzean, R. W., Inland Revenue Office, Greenock.
 Jan. 4th, 1884—M'Gowan, J., Ellangowan, Dumfries.

Date of Election.

- May 7th, 1834—M'Gowan, Ed., 13 English Street, Dumfries.
 May 6th, 1832—M'Kenzie, J. C., Kirkcudbright.
 Jan. 4th, 1834—M'Kenzie, Mrs, Albany Bank, Dumfries.
 Nov. 7th, 1879—M'Kill, P. B., Coal Agent, Dumfries.
 Jan. 5th, 1883—M'Kinnon, Rev. J. D., Dumfries.
 April 4th, 1881—M'Kie, J., Ankorlee, Kirkcudbright.
 *M'Lean, J., High Street, Dumfries.
 Dec. 1st, 1882—M'Naughton, Miss, Terregles Street, Maxwelltown.

 Mar. 4th, 1879—Neilson, John, Academy, Dumfries.
 Nov. 7th, 1879—Newbigging, John, Kirkbank, Dumfries.
 *Nicholson, J. H., Chemist, Maxwelltown.

 Mar. 2d, 1833—Oughton, Robert, Castle Street, Dumfries.

 Dec. 7th, 1883—Paterson, Robert, 84 High Street, Dumfries.
 Dec. 7th, 1883—Paterson, Mr, Schoolhouse, St. Mungo.
 Jan. 5th, 1883—Pracki, Mons. De, Dumfries.

 April 3d, 1884—Rae, W., Schoolhouse, Templand, Lockerbie.
 *Reid, F., Greystone, Dumfries.
 Jan. 6th, 1882—Reid, J., Bank of Scotland, Dumfries.
 April 6th, 1883—Reid, Miss A., Greystone, do.
 April 6th, 1883—Reid, Miss M., Greystone, do.
 Nov. 3d, 1882—Richardson, Dr, Asylum, Isle of Man.
 Jany. 4th, 1878—Robb, G., Academy, Dumfries.
 Nov. 3d, 1882—Robb, Miss, Castle Street, Dumfries.
 Nov. 3d, 1882—Robb, Miss May, do. do.
 April 12th, 1882—Roddan, A., Plumber, do.
 *Rutherford, J., Jardington, do.
 Feby. 7th, 1879—Rutherford, John, Pleasance, Kirkmichael, Dumfries.
 July 7th, 1883—Rutherford, Dr, Crichton Royal Institution, do.

 May 5th, 1883—Sawyer, Henry, Episcopal School, St. David Street,
 Dumfries.
 Dec. 3d, 1880—Scott, W. G., Castle Street, Dumfries.
 Oct. 7th, 1881—Seiffert, C., Midsteeple Buildings, do.
 *Service, R., Galloway Street, Maxwelltown.
 *Sharp, Dr, Shirley Warren, Southampton.
 *Shaw, James, Schoolhouse, Tynron, Thornhill.
 April 4th, 1879—Shortridge, T., Beechwood Bank, Dumfries.
 Jany. 5th, 1883—Sloan, J., Barbeth, do.
 Oct. 6th, 1882—Smellie, J., 8 Queen's Place, do.
 Oct. 6th, 1879—Smith, J., Commercial Bank, do.
 Jany. 6th, 1882—Smith, J. A., Crichton Royal Institution, Dumfries.
 *Smith, J., Terregles Street, Maxwelltown.
 Dec. 1st, 1883—Smith, W., 9 Terregles Street, do.
 Mar. 2d, 1877—Starke, J. Gibson, Troqueer Holm, Dumfries.
 *Stobie, P., High Street, do.
 June 3d, 1882—Sturrock, Rev. G., Corsock Manse, Dalbeattie.
 Nov. 11th, 1881—Symington, J., Schoolhouse, Whinnyhill, Troqueer,
 Dumfries.
 Feby. 2d, 1883—Symons, J., Royal Bank of Scotland, Dumfries.

 Dec. 1st, 1882—Tait, Mr, Church Crescent, Dumfries.
 *Thomas, James, High Street, do.
 April 5th, 1878—Thompson, Mr, Ironmonger, do.
 Jany. 6th, 1882—Thompson, J., jr., Rosemount Terrace, Maxwelltown.

Date of Election.

Nov. 3d, 1882—	Thomson, John, 90 Irish Street, Dumfries.
April 6th, 1883—	Thomson, J., Wallace Street, do.
Dec. 1st, 1876—	Thomson, Dr, do.
Dec. 7th, 1883—	Thomson, Mr, Midtown, Caerlaverock, Dumfries.
Oct. 8th, 1880—	Truckell, A. E., College Street, Maxwelltown.
Feb. 2d, 1883—	Tweddle, W., High Street, Dumfries.
Jany. 9th, 1880—	Watson, T., <i>Standard</i> Office, Dumfries.
Mar. 7th, 1879—	Watt, J., Rotchell House, do.
Oct. 6th, 1879—	Weir, Rev. R. W., do.
Oct. 6th, 1879—	Welsh, Mr, Waterloo Place, do.
Mar. 2d, 1877—	Williamson, James, Geddes Place, Maxwelltown.
Mar. 23d, 1880—	Wilson, J. 3 Norfolk Terrace, Dumfries.
Nov. 3d, 1882—	Wilson, Mrs, do., do.
Dec. 1st, 1882—	Wilson, Dr J. Connal, Thornhill.

CORRESPONDING MEMBERS.

Bennett, A., 107 High Street, Croydon.
 Black, G. F., Antiquarian Museum, Edinburgh.
 Brown, J. Harvie, Dunipace, Larbert.

Cameron, P., jr., 31 Willowbank Terrace, Glasgow.
 Carruthers, W., Botanical Department British Museum,
 London.

Dairon, J., Wells Street, Moffat.
 Dunsmore, J. Brideport, Conn., U.S.A.

Gill, Dr Battershell, 9 Cambridge Terrace, Regent's
 Park, London.
 Graham, Rev. W., The Manse, Trinity, Edinburgh.
 Gray, P., 24 St. Josephine Avenue, Buxton, London.

Hastie, George, Antiquarian Museum, Edinburgh.
 Henderson, R., Manitoba, America.

King, J. J., 207 Sauchiehall Street, Glasgow.

M'Ilwraith, W., Rockhampton, Queensland.
 M'Meehan, J., Tasmania.

Starforth, John, Architect, Edinburgh.

Thomson, Joseph, Gatelawbridge, Thornhill and Africa.
 Turner, R., 3 Westbank Place, Hillhead, Glasgow.

APPENDIX B.

LIST OF SPECIMENS, &c., DEPOSITED IN THE OBSERVATORY MUSEUM SINCE OUR LAST PUBLICATION.

No.	Date of Deposit.	Specimens.	Presented by
159	Apr. 28th, 1882	Vendace	Major Bowden
160	" "	Albino Flounder	Mr Ballantyne, Carsethorn
177	June 1st, "	Group of Zoophites & Sponge	.....
178	" "	Pipe Fish	Mr Black, Arbigland
179	" "	Egg from inside of ordinary Hen's Egg	Mr R. Maxwell
180	" "	Drawing of Kirkcudbright Castle	Mr Thomson
184	June 21st, "	Tiger Python	Mr R. Service
187	July 18th, "	<i>Sepia officinalis</i>	Mr Irving
191	Aug. 30th, "	34 Specimens of Carices	Mr J. M'Andrew
193	" "	Centipede	Mr Aitken
194	" "	Adder	Mr R. Service
195	" "	Slow Worm	Do.
196	" "	Broad-nosed Eel	Lochmaben
197	" "	Sharp-nosed Eel	Do.
198	" "	Jar with 3 Roach	Do.
199	" "	Do.	Do.
200	" "	Jar with 1 Roach	Do.
201	" "	Jar with Perch	Do.
...	May 18th, 1883	27 Specimens of Mounted Parmeliæ	Mr J. M'Andrew
...	" "	Jew's Prayer in Hebrew	Mr J. M. Brown
...	" "	Gun Flint	Major Bowden
...	" "	5 Specimens of Whitby Jet	Do.
...	" "	Nodule of Flint enclosing Echinus	Do.
...	" "	Tooth of Extinct Shark (<i>Catcharidon megaladon</i>)	Do.
...	" "	Pitch Stone from Arran	Do.
...	" "	Petrified Palm, Barbadoes	Do.
...	" "	7 Copper and 1 Silver Coins	Mr Smith
...	Oct. 5th, "	Collection of Characæ	Mr A. Bennett, F.L.S., Croydon
...	" "	Piece of first Steamship, Ammonite, and other Fossils	Mr Todd
...	Dec. 26th, "	Fish in spirit with Salmon Disease (<i>Saprolegni ferax</i>)	Mr T. Rae Bruce of Slogarie
...	Apr. 9th, 1884	6 Copper Coins	Mr D. Carnegie
...	" "	Large Mexican Silver Coin	Mr F. Armstrong

B O O K S .

Date of Deposit.	Name of Book.	Presented by
Oct. 5th, 1883	Catalogue of Antiquities in Brussels Museum	Mr J. Gibson Starke
Dec. 26th, ,,	List of Foreign Correspondents to Smithsonian Institution	Smithsonian Institu- tion
December, ,,	"Heart's Ease," 1682	Mr Roddick
Do. ,,	"Dying Thoughts," 1744	Do.

There are still in the hands of the Secretary a large Collection of Mounted Mosses and Lichens, presented by Mr M'Andrew; and in the hands of the President a Collection of Geological specimens, for which there is no room in the Museum at present. Nearly all the Books, which have been presented to the Society during the last two years, are in the hands of the Secretary, Assistant Secretary, and other Members.









