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NATURAL HISTORY

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No. 8.

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THE TRANSACTIONS

AND

JOURNAL OF PROCEEDINGS

OF THE

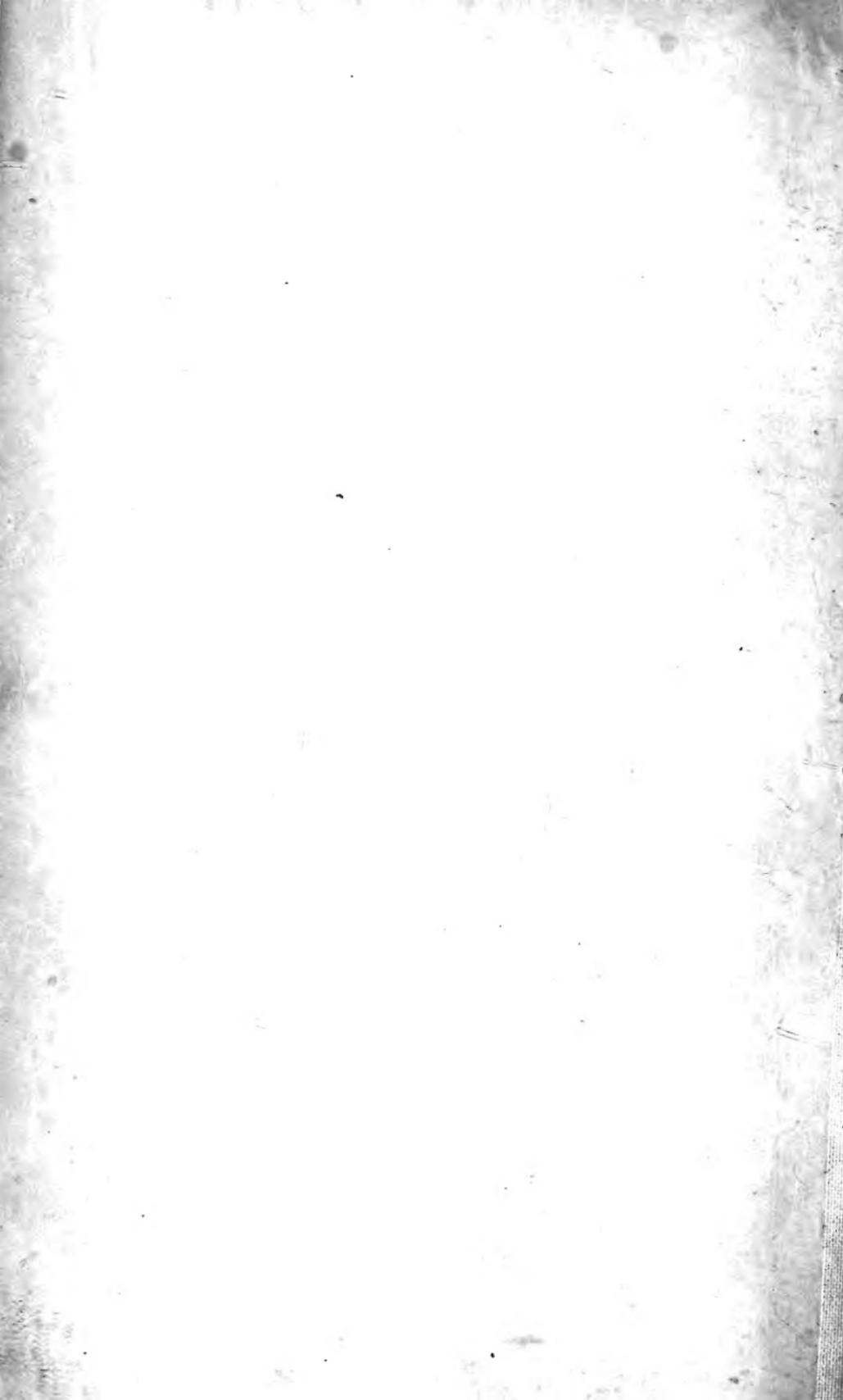
DUMFRIESSHIRE & GALLOWAY

Natural History & Antiquarian Society.

SESSION 1891-92.

PRINTED AT THE STANDARD OFFICE, DUMFRIES.

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PROCEEDINGS AND TRANSACTIONS

OF THE

DUMFRIESSHIRE & GALLOWAY

NATURAL HISTORY & ANTIQUARIAN SOCIETY.

SESSION 1891-92.

2nd October, 1891.

Rev. WILLIAM ANDSON in the chair.

New Members.—Dr John Maxwell Wood, Irish Street. Mr E. G. Baker, F.L.S., of the British Museum, was elected an honorary member on the ground of the interest he had displayed in the presentation of the botanical specimens to the Society by Mr Carruthers, F.R.S., and the labour he had expended in arranging them.

Donations.—Richard Rimmer, Esq., F.L.S., the President of the Society, presented a copy of his Book, "The Land and Fresh Water Shells of the British Isles;" the Transactions of the Geological Society of Glasgow, 1888-90; the Report of the Manchester Museum; the Transactions of the Botanical Society, Vol. 18; Simple Method of taking Phenological Observations; Entomologist's Record, Nos. 4 and 10; Belfast Naturalists' Field Club, 1890-91; Essex Naturalist, January to May, 1891; Transactions of the Meriden Scientific Association, 1889-90; Report of the British Association, 1890; the Report of the Smithsonian Museum, 1889; Transactions of the Botanical Society of Edinburgh, Nov., 1890 to March, 1891; Proceedings of the East of Scotland Union of Naturalists' Societies, 1890; Time Reckoning for the 20th Century (from the Smithsonian Report for 1886); Report of the Canadian Institute, Toronto, 1891; Spear-Throwers of the Ancient

Mexicans and Coast Indians of Texas (from the Peabody Museum); the Handbook for Cardiff for the British Association, 1891.

SECRETARY'S REPORT.

The Secretary (Dr Edward J. Chinnock) read his annual report :

The membership of the Society now numbers 163 ordinary members, of whom 30 have been admitted during the session now closing. There are also seven life members and 23 honorary members, one of whom, Dr Anstruther Davidson, was elected during the closing session. There are thus 193 names on the roll. The Society has sustained a loss in the death of one of its most esteemed members, Mr George Hamilton, of Kirkcudbright.

*Ossa quieta, precor, tuta requiescite in urna,
Et sit humus cineri non onerosa tuo.*

Eight evening meetings and four field meetings have been held during the session. At the former 24 valuable papers were read, all of which showed laudable research, and some were of very great interest. Without detracting from the merits of the other contributors, the papers communicated by Messrs Andson, Corrie, Dudgeon, M'Andrew, J. H. Thomson, Weir, and Wilson may be mentioned as particularly interesting.

The thanks of the Society are due to the painstaking scientific investigations of Messrs Andson, Scott-Elliot, M'Andrew, Fingland, and Johnstone, and also to the Misses Hannay for the care with which they have mounted the specimens for the Herbarium, and for taking charge of the Herbarium during the winter months. The indefatigable labours of Mr Scott-Elliot in the formation of our Herbarium are worthy of the thanks of the Society. His report shews that the collection bids fair to be one of the most complete in Great Britain, outside of the national collections. It is a great honour to the Society to possess a member who devotes himself to the work with such enthusiasm as Mr Scott-Elliot exhibits.

As our Society is affiliated with the British Association, all our scientific papers are recorded in the list of contributions annually published by that distinguished Society. I may mention that I affixed my name in May, as representing our Society, to a Petition

to Parliament in favour of Mr A. E. Pease's Bill, entitled "A Bill to Amend the Wild Birds' Protection Act, 1880."

A valuable collection of botanical specimens was presented in March to the Society, through Mr Scott-Elliot, by Mr Carruthers, Curator of Botanical Department of the British Museum. Our botanical members being so widely scattered our collection of plants cannot be examined and studied as much as it deserves. The question will soon arise how the Flora of the District is to be published so as to unite the investigations and labours of all the members who have been working in this field of science, due recognition being given to all.

Of the Field Meetings, those to the Border and to the Moffat district were particularly interesting. The weather was, unfortunately, against the success of the last; but the members who dared to brave the elements had no cause to regret their decision.

Our valuable scientific library has not been utilised by the members to the extent which is desirable. Various scientific journals have been circulated among the members who have expressed a desire to peruse them.

As the subscription for membership is so small it would be an advantage if the numbers were increased. The thanks of the Society will be due to those members who can introduce such friends as are likely to take an interest in the success and well-being of the Society. Several members have lent their co-operation to the Meteorological Society in taking phenological observations in this district.

TREASURER'S REPORT.

The Treasurer (Mr John A. Moodie) read his annual report—from 1st October, 1890, to 30th September, 1891:—

CHARGE.

Balance in treasurer's hands at close of last account...	£0	11	0
Balance at credit of Society with Dumfries Savings Bank	22	16	0
Subscriptions from 138 members at 5s	£34	10	0
„ from 7 members at 2s 6d	0	17	6
		35	7
Entrance fees from 21 new members	2	12	6
Arrears recovered from members	1	2	6
Copies of Transactions sold	3	8	5
Interest on bank account	0	15	0
		£66	12
		11	

DISCHARGE.

Paid salary of keeper of rooms	£1 10 0
„ for stationery, printing, &c.	1 6 6
„ for periodicals, &c.	0 16 6½
„ for coals and gas	0 6 7
„ premium of insurance	0 4 6
„ Secretary's outlays and postages	1 12 10
„ Treasurer's „ „ „	0 12 9
„ expenses of calling meetings, as follows :	
Post cards	£4 7 1
Gratuity for addressing same at 1s per 100	1 4 0
Robert Johnstone, printer	1 0 0
	<hr/>
	6 11 1
„ for six vols. of “Dumfries Journal”	5 0 0
„ accounts for printing and publishing transactions for three years, and for illustrations	47 5 7
„ miscellaneous accounts	0 7 2
	<hr/>
	£65 13 6½
Balance of funds in favour of society, as follows :	
(1) Cash in Treasurer's hands	£0 8 4½
(2) Balance in Savings Bank	0 11 0
	<hr/>
	0 19 4½
	<hr/>
	£66 12 11

J. A. MOODIE, Hon. Treasurer.

DUMFRIES, Oct. 24, 1891.—I have examined the foregoing account, and the cash book of the society, compared them with the vouchers, and find the balance stated to be correct.

JOHN NEILSON.

ELECTION OF OFFICE-BEARERS.

The following were elected office-bearers and members of the committee for the ensuing session :—

President—Richard Rimmer, F.L.S.

Vice-Presidents—Rev. William Anderson, Mr James Barbour, Major Herbert G. Bowden, and Mr Thomas M'Kie, F.S.A.

Treasurer—Mr John A. Moodie.

Secretary—Edward J. Chinnoek, LL.D.

Librarian—Mr James Lennox, F.S.A.

Curator of Museum—Mr James Davidson.

Curator of Herbarium—Mr George F. Scott-Elliot, M.A.

Members of the Council—Messrs John Brown, John Cowan, Thomas Laing, Robert M'Glashan, Robert Murray, John Neilson, M.A. ; George H. Robb, M.A. ; Philip Sulley, James S. Thomson, James Watt.

6th November, 1891.

Mr JAMES BARBOUR, V.-P., in the chair.

New Members.—Miss Lennox and Miss Agnes B. Lennox, Edenbank.

Donations.—Copies of Linnæus's *Genera Plantarum* and *Philosophia Botanica*, presented by Mr James Barbour, V.-P.; Catalogue of Antiquities and Curiosities in possession of Dr Paterson of the Bridge of Allan, by Mr S. S. Brown, of Crieff; Part I. of the *Flora of Dumfriesshire*, by Mr G. F. Scott-Elliot; the Proceedings of the Berwickshire Naturalists' Club.

COMMUNICATIONS.

I.—*Mr Aitken's Theory of Dew.* By the Rev. WILLIAM ANDSON, V.-P.

In former times various ideas prevailed as to the origin of dew—some maintaining that it descended from the heavens, and that the moon and stars had no small influence on its formation; and others that it ascended from the earth. But it was not until the year 1814, when Dr Wells, a London physician, published his work upon the subject, that it received a really lucid and philosophical explanation. His theory was that dew is simply aqueous vapour condensed out of the air when in contact with the surface of bodies cooled by radiation below the dew-point of the air at the place. His opinion, supported by a series of experiments made by Dr Wells, and described in his book, has since that time been generally received as the true one. Within the last few years, however, considerable additional light has been thrown upon the subject by the experiments of Mr Aitken of Darrock, an acute and careful observer in meteorology, and published in a paper read by him before the Royal Society of Edinburgh in December, 1885. Mr Aitken does not controvert the opinion expressed by Dr Wells in his essay as to the causes which operate in the formation of dew. The only point in regard to which he suggests a different theory relates to the source of the vapour which is precipitated into dew. Dr Wells thought that most of the moisture deposited as dew at night was taken up from the ground by evaporation during the heat of the day. He admitted, indeed, that some part of it might be owing to vapour rising out of

the ground at night, as bodies near the surface get dewed sooner than those higher up, though equally cold with them, but contended that only a very small part could be derived from this source. Taking up the subject at this point, Mr Aitken instituted a series of experiments, the result of which led him to a different conclusion as to the source of the vapour which condenses on the surface of bodies on dewy nights. Being aware, from previous observations, that the temperature of the soil after sunset at a small depth below the surface was uniformly higher than that of the air above it, and sometimes to the extent of 8° or 10° , he inferred that while this condition existed there would be a tendency for vapour to rise, and pass from the ground into the air, and that, mingling with the air, its moisture would be condensed into dew, wherever it came into contact with a surface cooled by radiation below the dew-point. It then occurred to him that, if vapour were really rising from the ground during the night, it might be trapped on its passage to the air, and that this might be accomplished by placing over the soil shallow pans of tin plate in an inverted position. The first experiments were made on grass land, and the result is thus stated by Mr Aitken in his paper :—(1) There was always a deposit of dew inside the traps ; (2) There was always more moisture on the grass inside the traps than there was on the grass outside ; (3) There was sometimes a deposit inside when there was none outside. Experiments of the same kind were made on bare soil, and with the same result. Another method of testing the point under investigation was by cutting out a thin portion of turf from the lawn, and placing it in a small shallow pan six inches square and a quarter of an inch in depth. This portion of turf was then weighed in a fine balance, turned by less than a grain, and restored to the position from which it has been cut out, with the surface of the turf exposed. Having been left in this position for some hours while dew was forming, it was taken up and weighed again, when it was found to have lost weight to the extent of 24 grains. This could be explained only by a certain amount of the moisture it contained passing out of it in the form of vapour, part of which would be condensed into dew on the blades of grass, and part escape into the air. Experiments were also made on hard roads and gravel. It is a well-known fact that dew rarely ever appears on the surface of these, even on the most dewy nights. This has often been attributed to the greater radiating power of

vegetation as compared with the material of which our roads are composed. But the true explanation is rather that the stones or compact earth on the surface of the roads are in contact with the ground, and in such good heat communication with it that the temperate of their upper surface is kept from falling below the dew-point. But if the under surfaces of the stones are examined on a dewy evening they will generally be found to be copiously bedewed, while the upper surfaces are dry—a good deal of the vapour rising from the ground being trapped by the under sides of the stones, while that which escapes is not enough to saturate the air at the temperatures of the exposed surfaces. All these facts seem plainly to prove that under most conditions of our climate vapour rises from the ground at night as well as during the day, and even from parts of it which at first sight would seem least likely to yield it—that is, from hard, dry-looking roads. They shew that under ordinary conditions there is a sufficient amount of heat in the soil (the heat stored up during the day) to cause evaporation to a certain extent at night of the moisture it contains; and so long as the soil is warmer than the air above, this vapour will tend to diffuse itself upwards, and part of it will be condensed into dew on the blades of grass cooled at the time below the dew point. And Mr Aitken's conclusion from the experiments referred to is that dew on bodies near the surface of the earth is almost entirely formed from the vapour thus rising at the time out of the ground. Mr Andson concluded his paper with some general remarks on the conditions, favourable or the reverse, to the production of dew. In the course of his paper he remarked that the removal of stones from dry and stony fields, which had sometimes been tried with a view to the improvement of the land, had been found to be prejudicial to the crops in dry seasons. The explanation of this is that the stones lying on the surface of the ground prevent evaporation to a considerable extent during the day, and that their under surfaces during the night are bedewed by the vapour rising from the ground, and in this way the moisture is conserved and returned to the soil, whereas otherwise it would have escaped into the atmosphere.

II.—*Shortbread at the Lord's Supper.* By Rev. JOHN H. THOMSON.

In November, 1888, I was assisting at the dispensation of the Lords' Supper in the Free Church congregation, Portpatrick. When the time came to remove the cloth that covered the bread for the Communion service, I was startled to notice that it was not the bread of a quarter loaf such as I had hitherto seen at the dispensation of the Lord's Supper, but shortbread, made up into round thin cakes of half-an-inch or less in thickness, cut into eight sections, what, in Scotland, we call "Petticoat Tails." My curiosity was excited, and I have been led to make inquiries as to past practice in the South of Scotland. The result of my inquiries is that, according to the late Rev. Mr Urquhart, of Portpatrick, it had been in use in Portpatrick from time immemorial. In Stranraer, in the Free Church congregation, shortbread has only been given up within the last few years, and loafbread adopted in its place. About fifty years ago, according to the late Mr George Henderson of Nunholm, it was in use in St. Mary's, Dumfries. In the parish of Newabbey a lady, the daughter of a former minister of the parish, tells me that she well remembers seeing the shortbread come from Dumfries on the Saturday before the Communion Sabbath. On asking a well-known baker in Dumfries if he had ever seen shortbread used at the dispensation of the Lord's Supper, his reply was that he had never seen anything else in the country in his younger days. It was only when he came as a young man to the town that he had seen anything else. So far as I have been able to inquire, the use of shortbread at the Lord's Supper is quite unknown in Edinburgh. I never heard of its use in the forty congregations of the Reformed Presbyterian Church that united with the Free Church in 1876. But the Rev. Mr Andson tells me that he has heard of its use in Arbroath; an Irish friend tells me that he has seen it used in Londonderry. Dean Stanley, in his "Christian Institutions," fourth edition, page 61, has a note in which he refers to the use of "shortbread" in the Lord's Supper in Galloway. The note is appended to a discussion on the wafer, whether or not its form is derived from the large, round, thin biscuit of the Passover, the Paschal Cake. The Dean has doubts about this derivation, because the Greek Church, so tenacious of ancient customs, does not use the wafer; and, secondly, because the round form is sufficiently accounted for by the fact that the bread

used by the ancient world (as seen in the bakers' shops at Pompeii, and also in the paintings of the catacombs) was in the shape of round, flat cakes. The note is a curious one, and illustrates how even a most intelligent Englishman may fail to understand matters in Scotland. The Dean says—"A curious example of an adventitious sacredness attaching itself to a particular form of sacramental bread is to be found in the use of 'shortbread' instead of the ordinary leavened or unleavened bread amongst the 'hill men' of Scotland." "I myself," writes a well-informed minister of the Church of Scotland, "thirty years ago assisted at an open-air Communion in the parish of Dalry, in Galloway, where this had been the custom from time immemorial. The minister's wife sent so many pounds of fresh butter to a distant baker, and received back preparatory to the Communion so many cakes of 'shortbread,' *i.e.*, brittle bread, which was kept nearly as carefully as a Roman Catholic would keep his wafer." The note is interesting, although the good people in Dalry would be surprised to hear themselves called "hill men," and that they attached any particular sacredness to the form of the bread used in the Lord's Supper. Dr John Lee, in his "History of the Church of Scotland," vol. i., p. 389, has an appendix in which he gives extracts from Session and Burgh Records relative to the dispensation of the Communion. In the Edinburgh Session Records under "1560, Sunday 2nd of March, ye Communion ministrat to John Knox in the hie kirk of Edinburgh. To H. Meffen, for vi** breid to the Communion, 40s; 8½ gallons wyne, 3l 8s. 8th June, Second Communion, iij* breid, 30s; 8 gallons wine, 4l 16s. 8th September. Third Communion, 24 breid, 28s; 6½ gallons wyne, 3l 10s." There are several similar entries down to 9th May, 1574. In them all the bread is entered simply as bread. Am I right in inferring that shortbread in the Lord's Supper was unknown to John Knox, that it was simply household bread that he employed, and that the use of shortbread must have been confined to districts away from the Metropolis, where old practices would not be so easily dislodged? What is the origin of this practice once so largely characteristic of the South of Scotland? Can it be because of the ease with which shortbread, *i.e.*, brittle bread, can be broken for distribution among the communicants at a time when oat cakes, hard and not easily broken by the hand or the teeth, would be the bread in daily use among the mass of the people, or can it be that

the shortbread is a form of the unleavened bread of the middle ages that has still lingered in the South of Scotland long after leavened bread had been adopted in the large cities? Perhaps the members of the Society can contribute materials to a right answer to these questions.

Rev. R. W. Weir said he had been brought up on the East Coast, amongst people who often talked about old church customs; and he thought if they had ever themselves witnessed a dispensation of the Communion with shortbread, or had heard of others having done so, they would have certainly mentioned it some time or other in his hearing. Dr Sprott, in his book, said it was a custom that prevailed in Dumfriesshire and Galloway, and that the explanation of it was that shortbread was unleavened bread. He had heard of it frequently since he came to the district; and he knew that in Buittle it was still used. As to the theory of unleavened bread, he thought it very doubtful. He supposed that in this district there would be two kinds of bread, the oatbread for general use, and the shortbread for company use, and that at the Communion they naturally took the best kind of bread they knew of. In the minutes of the Dumfries Kirk-Session he had seen no notice of a change in the matter of providing the bread; the change, he supposed, would be made without any decree on the part of the Kirk-Session. Similar changes had taken place in regard to the wine. He found in old days that in Dumfries and elsewhere it had always been claret that was used at the Communion; but there came a time when claret ceased to be so popular in Scotland, and port took its place. Then port was introduced as the Communion wine.

Mr Andson had never seen in Arbroath, his native town, shortbread employed, but he had heard it spoken of as used in former times at the Communion. He was not sure about its being unleavened bread. He thought Mr Weir's impression was the correct one, that it was the finest kind of bread.

Mr Thomson, in answer to a question by Mr Weir, said that he had never heard of shortbread having been used at the Communion among the Cameronians.

III.—*New and Rare Finds in 1891.* By GEORGE F. SCOTT-ELLIOT, B.Sc.

My time has been so much taken up this summer by the observation of insect visitors that I have not been able to explore in as thorough and systematic a manner as I had hoped the different valleys of Dumfriesshire. The following list, however, shows that there is a very great deal of work still to be done, and though the majority of the new records (marked thus *) are escapes or outcasts, still the mere fact of their presence, and particularly of their being established, is of some interest. Mr Britten remarked to me that from what he had seen the presence of such an enormous number of casuals seemed characteristic of the County, and that he had never seen such a number in any other county flora. I must mention, however, that several members of this Society, whose names are quoted, have contributed to this list. It is very important that information of this kind should be printed, so that proper credit should be given to the first discoverer of a new inhabitant. In the course of my studies on the Dumfries flora, I have found the same plant recorded twice, thrice, or even in one case about six times.

- Lychnis Githago*, Lam.—Abundant in corn fields at Gilnockie.
Cerastium arvense, Linn.—Occasionally along the railway from Portrack to Holywood, and at Racks Station (latter Misses Hannay).
 **Malva rotundifolia*, L.—Glentarras siding, near Langholm.
Geranium lucidum, Linn.—On rather wet whinstone rocks, the Glen.
 **Impatiens parviflora*, Linn.—An escape fully established in sand along west shore of Auchencairn Bay.
 **Medicago denticulata*, Sibth.—Between Glentarras and Gilnockie on railway cinders
 **Melilotus parviflora*, Lam.—On cinders on the railway, Glentarras siding.
Trifolium hybridum, Linn.—Seems common on sandy holms by Annan; also near Gilnockie.
 **Trifolium ochroleucum*, Linn.—Railway near Langholm.
Conium maculatum, Linn.—Near Mouswald Manse; one mile below Kingholm Quay.
Valeriana pyrenaica, Linn.—Along the Cluden from Routen Bridge to Jardinton; Esk between Langholm and Canonbie.
Scabiosa arvensis, Linn.—Very abundant along the Liddle, Canonbie.
Eupatorium cannabinum, Linn.—Abundant, Southwick (Mrs Stewart); Dock wall, Dumfries (Miss Hannay).
Tanacetum vulgare, Linn.—Creetown shore.

- Senecio viscosus*, Linn.—Abundant along the railway between Dumfries and Holywood. (Mr Johnston pointed it out to me at Beattock, and on looking at Holywood I found it there.)
- Carduus acanthoides*, Linn.—Shingle beach, near Newbie.
- Carduus heterophyllus*, Linn.—Very abundant, wet humus of woods, Billholm and Linnholm, Eskdale. (Probably Sibald's locality about 1840.)
- Tragopogon pratensis*, Linn.—Very abundant along the railway from Lockerbie to Lochmaben.
- Campanula latifolia*, Linn.—Abundant by Esk, Billholm to Bentpath.
- **Polemonium caeruleum*, Linn.—Abundant meadow at Friars' Carse Loch.
- **Linaria minor*, Derf.—Between Wamphray and Dinwoodie.
- **Linaria Cymbalaria*, Mill.—Old wall near Castledykes Cottage (Miss Hamilton).
- Veronica monatana*, Linn.—Common along Cargen, Nith, and in Annandale and Eskdale.
- **Euphorbia dulcis*, Lam.—Routen Bridge.
- **Crocus nudiflorus*, Sm.—Stuart's Wood, Canonbie (Miss Taylor).
- **Polygonatum multiflorum*, All.—Woods at Kirkmichael (Mr Masterman).
- **Ornithogallum umbellatum*, Linn.—Nethermills, by hedges Annan (Miss Hannay); Isle orchard.
- Blysmus compressus*, Panz.—Billholm Burn.
- Scirpus silvaticus*, Linn.—By Annan, three miles below Beattock.
- Carex pendula*, Huds.—Near Gilnockie Bridge.
- Festuca sylvatica*, Vill.—Byreburn; Tarras Water.
- Athyrium Filix fœmina*, var., *Fieldie cristatum*, Moore.—Kirkconnel, per Mr Harper.
- Asplenium Rutamuraria*.—Bridges, common, Routen, Langholm, Milk (also on walls and limestone shale, Mr R. Beattie).
- Hymenophyllum unilaterale*.—Arkleton and Tarras (Mr R. Beattie).

IV.—*Notes on a Herbarium collected by Miss E. G. Adams and Miss S. D. Johnston at Cowhill.* By G. F. SCOTT-ELLIOT, F.L.S.

I have been permitted to look over this collection of about 300 species from the immediate neighbourhood of Cowhill. It is, in fact, a very complete little flora of the district, and, as will be seen from the following list of the rarer forms, remarkable for the number of interesting plants. Those marked thus * are, I think, new records for the County, and reflect great credit on the finders:—

- Trollius europæus*, Linn.—Along the Nith.
- **Papaver Argemone*, Linn.—Holywood Station.
- Chelidonium majus*, Linn.—Near Cowhill.
- Arabis Thaliana*, Linn.—Sandy gravel, Holywood.

- Alliaria officinalis*, Andrz.—Between Portrack and Cowhill Lodge by the road.
- Viola lutea*, Huds.—Cowhill.
- Stellaria nemorum*, Linn.—Woods by river.
- Malva moschata*, Linn.—Road to White Bridge.
- Malva silvestris*, Linn.—Roadside.
- Geranium pratense*, Linn.—Abundant.
- Geranium silvaticum*, Linn.—Abundant.
- Lotus major*, Brit. Fl.
- Trifolium hybridum*, Linn.—Holywood Station.
- Ornithopus perpusillus*, Linn.—Sand at Holywood Station.
- Potentilla reptans*, Linn.—Cowhill grounds.
- Rosa spinosissima*, Linn.—Cluden Mills.
- Sedum acre*, Linn.—Cowhill grounds.
- Sedum Telephium*, Linn.—Along Portrack Road.
- Daucus Carota*, Linn.—Holywood Station.
- Valerianella olitoria*, Mœnch.—Holywood Station.
- Vinca minor*, Linn.—Roadside.
- Anagallis arvensis*, Linn.—Fields.
- **Primula elatior*, Jacq.—Banks of Nith, Cowhill.
- Anchusa officinalis*, Linn.—Only recorded hitherto by P. Gray, about 1840.
- Verbascum thapsus*, Linn.—Cowhill grounds.
- Mimulus luteus*, Linn.—Very common by the river.
- Veronica montana*, Linn.—Shady places.
- Origanum vulgare*, Linn.—Only recorded by P. Gray and Singer, in Stat. Acc., 1843.
- Scutellaria galericulata*, Linn.—Near river.
- Polygonum Bistorta*, Linn.—Cowhill grounds.
- Polygonum Hydropiper*, Linn.—Wet places.
- **Euphorbia amygdaloides*, Linn.—Cowhill.
- Epipactis latifolia*, Auct.—Cowhill woods.
- **Narcissus pseudo narcissus*, Linn.—Fully naturalised in the woods.
- **Galanthus nivalis*, Linn.—Also fully naturalised.

19th November, 1891.

LECTURE.

Improvement of Our Fresh Water Fisheries.

By Mr J. J. ARMISTEAD.

A Public Meeting for the purpose of hearing an address on the above subject by Mr Joseph J. Armistead, of the Solway Fishery, Newabbey, took place in Free St. George's Hall, on Thursday evening, under the auspices of Dumfries and Galloway Natural History and Antiquarian Society.

Sir Herbert E. Maxwell, Bart., M.P., presided; and, in introducing the lecturer, remarked that he knew practically nothing of the result or practice of pisciculture, although he had been familiar for some years with the renown which had been attained in that walk by Mr Armistead. The importance of the subject, he fancied, could scarcely be overrated. Immense sums had been spent by the Governments of various countries in developing their fisheries. During a recent visit which he made to inspect the railways in the west of Ireland, promoted by the Government for the purpose of developing the fishings, a friend, an eminent judge, resident in a rural district, commented somewhat bitterly to him on the result of past effort in the direction of developing the fishings. He said the Government had spent £10,000 on a pier and a harbour at that place and there was not a single fishing boat in it, nor had there been since the pier and the harbour had been erected, and gave his word of honour that every pound of fish that was consumed in his house was bought in Dublin. That was a state of things that did not speak much to the credit of the art of pisciculture in Ireland. But there were many elements which had to be taken into consideration in Ireland which he ventured to think, fortunately, had not to be considered in the light of obstacles in this country. And he had no doubt that even the desire which always characterised Scotsmen to develop to the utmost everything that was useful, everything that was profitable, and even everything that was ornamental in their own country, would be assisted and informed by the lecture. (Applause.)

Mr Armistead referred to the important results which had been obtained in a few years from a course of fish culture in the rivers of New Zealand. Trout were introduced to that colony in 1868 by means of ova obtained from Tasmania. The New Zealand Government very wisely took the work in hand, and so successfully had it been carried out that to-day many of the rivers of that country were full of magnificent trout that had grown beyond all expectation, some of them being reported to weigh 40, 60, and even 80 lbs. Mr Armistead touched also upon the success of the efforts of the United States Fish Commission in introducing salmon into the Connecticut river, where previously they had disappeared for three-quarters of a century. In the report of the Commission (1884) it was stated that for four successive years the yield had been nearly double that of the years preceding artificial propa-

gation. This resulted from planting about two million fry. The catch increased from five to fifteen million pounds in five years. So enormous had the quantity of salmon in one of the American rivers become that they caught them by machinery. There was a great wheel, driven by water power, with immense scoops, and as the fish were raised to the top of the wheel in these scoops they were dropped down a hole and carried away by a shoot. Then the fish were strung together and allowed to float down the river for a few miles to the canning establishments. Two or three steam launches were here employed for picking them up. As regards stocking with trout, the case of the famous Lake Vyrnwy, in Wales, stood out prominently. What could be done with trout could be done on a far greater and more profitable scale with salmon. That was a point about which he was quite convinced. There was, however, this difference, that trout being retainable in fresh water ponds could be successfully cultivated by the individual, whereas salmon must be allowed to go to sea if they were to produce the highest results, and this rendered individual action impracticable. By a well-directed system of co-operation amongst owners of fisheries, it was beyond any doubt that splendid results might be obtained. No investment would pay a much better dividend if properly managed. Having instanced the success attending the stocking of Lochleven, Mr Armistead went on to allude to Lake Vyrnwy. It was stocked with trout fry less than two and a half years ago, and during the season just ended upwards of 4000 splendid fish had been taken by fly fishing alone. The largest fish caught was a little under 3 lb., and a large proportion of them ran from 1 lb. to 2 lb. Taking the catch at 1s per lb., this represented a money value of £200, the sum the fry put in were worth. If the nets had been used the catch would have been ten times as large. Our lakes were adapted for cultivation in the same way, and a series of rearing ponds might be made for stocking them with fish. And in this country there was great necessity for it. As showing this he read, amid laughter, a paragraph from *Rod and Gun*, in which it was stated that at an angling competition the first prize man caught eight trout weighing $9\frac{1}{2}$ oz. In the case of salmon man must step in and interfere with nature's balance. In many cases he had done so already. He had altered the flow of water, he had polluted it, he had drained the hills and so cut off nature's supply for dry weather. Many

trout streams where formerly there was good fishing were now useless. The large fish of days gone by had disappeared. One reason was that there was not food in our streams, with which the hill drainage might have something to do. The salmon had the advantage. They went away to sea, where they could find an unlimited supply of food. The one way to remedy the falling off in the size and condition of trout was by properly carried out cultivation. Mr Armistead proceeded to emphasise the importance of selecting the best fish for hatching purposes. They found a great necessity of importing new blood from time to time and getting the very best breeds they could. An enormous destruction of the eggs occurred in nature, which they could step in and prevent. It seemed a very wise provision that enabled man to increase the stock of fish in our rivers when the necessity arose, as it had done at the present day. The lecturer produced an artificial ova bed and explained its construction, and demonstrated how simply the fish could be relieved of the ova without injury. He also exhibited a number of eggs in process of hatching, and explained that at certain stages they could be conveyed to great distances without injury. In speaking of the destruction often caused by dog fish and eels, he mentioned one instance in his own experience in which two eels in three months killed 500 out of 1760 yearling trout placed in a pond, and remarked on the neglect of the eel fishery. The rapid rise and fall of our rivers, he believed, had a very great effect upon our fisheries. It was quite possible that if we went in for salmon cultivation on a large scale we might have to go in for storing or impounding water. This would be advantageous in more ways than one. It would prevent the enormous loss to property owners which was caused by the heavy spates that came down now in far greater volume since the land had been drained. Again, when, owing to that hill drainage, the waters were so low that the fish could not move about, they would be able at little cost to send down artificial spates that would enable them to get to the sea. The fish were now kept longer in our rivers than they used to be, and the consequence was that they got out of sorts and died. The remedy was to get them to a higher temperature—to the sea. This might often be done with little difficulty and expense by means of artificial spates. As things were, the water swept down in greater volume and violence than formerly, and the mischief done to the spawning beds was

increased, some being washed away, some buried, and others left dry. They found pollution had greatly increased, they found the fungus more virulent, and they found that poaching had increased, because the fish were much more valuable than they used to be and much easier of access. He ventured to say that it would very often pay better to take them away altogether than to watch them. There might be cases where fish were left weather-bound in pools and watched continually by men paid for doing so. If the river were in the hands of a proper pisciculturist he would, if the fish could not get away themselves, take them out of the pool and carry them to the proper place. The advantages that had resulted from cultivation in New Zealand and the United States could, he assured them, be obtained elsewhere. They had proof sufficient of how the thing could be done, and let them get to work without the loss of more valuable time.

Mr Johnstone-Douglas asked if Mr Armistead could give any indication of his views as to the origin, the cause, and the possible prevention of the salmon disease?

Mr Armistead, in reply, said there were several ways of curing salmon disease, and stated that he had cured a great many fish that had been affected by giving them a bath in a chemical solution or putting chemicals on them. Permanganate of potash was one remedy, common salt was an excellent thing, but the best they could get was sea water. They knew that sea water was absolutely fatal to this fungus growth. The fungus, he affirmed, could not live in the sea, but he knew this had been disputed. He had cured hundreds of fish by immersing them for a considerable time in salt water. Very often that dose required to be repeated for a considerable number of times. The disease, however, was quite easily cured in this way. But to apply the remedy to salmon in a river might be a very difficult matter; still, he thought it might be done in many cases. If the fish were in a fit condition for the change, they should be got away to sea by all means; and if that were done he believed four-fifths of the diseased salmon would be cured immediately if they were not too far gone.

The Chairman supposed the salmon had been the subject of more separate Acts of Parliament from very early times in our history than any other item in the fauna of Scotland; but its humbler relative the trout, he believed, was not the subject of a

single Act of Parliament. He submitted to them whether, in view of the interests of the ever-increasing population, the time had not arrived when it would be well to consider legislation for the preservation of the common yellow trout. On the Tweed at the present season they would see hundreds of anglers catching trout in the condition of those they had seen that night, utterly unfit both for food and for sport. He did think that it would be in the interests of the inhabitants of our great towns who took their pleasure in angling, and in the interests of anglers generally, that some protection should be afforded by a close time for yellow trout. (Applause.)

3rd December, 1891.

Rev. WILLIAM ANDSON, V.P., in the chair.

New Member.—Mr Christopher Osselton, Sanitary Inspector for Dumfriesshire.

Donations.—Transactions of the Nova Scotian Institution of Natural Science; Annals of the New York Academy of Sciences; North American Fauna, No. 5 (U.S. Department of Agriculture).

COMMUNICATIONS.

I.—*Notes on the Flora of Moffat District for 1891.*

By Mr JOHN T. JOHNSTONE.

Last year, in a paper read at one of the Society's meetings, I gave a list of some rare plants formerly recorded for this district, but now requiring reconfirmation. Of that list I have this season found stations for four of them, viz. :—

Cardamine impatiens, L.—22nd August, near Kirkpatrick Juxta Manse, where it rather curiously occurs as a wayside plant at a damp and shady place along the roadside. Its former stations were at Garpel and Beld Craig Linns, and as some of the gravel on the road there was brought from the Beld Craig Burn, it is very probable that the plant is still growing there somewhere, although I have neither seen or gathered it there.

Vicia orobus, D.C.—21st June, Beef Tub and Corehead.

Arctostaphylos uva-ursi, Spreng.—Moffat Hills. This was gathered on the 29th Aug. (foliage only).

Salix lapponum, L., var. *arenaria*—Whitecoomb, where it occurs plentifully on the north side of the hill.

Of plants which are given in the Society's list, with no stations for this district, the following have been added this season :—

Papaver rhœas, L.—Waste ground, Beattock Station.

Sisymbrium officinale, Scop.—Waste ground near Industrial Schoolhouse.

Viola arvensis, Murr.—Sandbeds and cultivated fields, common.

Hypericum hirsutum, L.—12th Aug., Wamphray Glen.

Hippuris vulgaris, L.—Earshaig Lakes.

Conium maculatum, L.—Cornal Tower.

Apium nodiflorum, Reichb.—Earshaig Burn.

Polygonum amphibium, L., var., *Terrestr.*—Waste ground, Beattock Station.

Urtica urens, L.—Nethermill.

Sparganium simplex, Huds.—Earshaig Lakes.

„ *minimum*, Fr.— „

Scirpus sylvaticus, L.—Annan Water at Nether Murthat.

Scirpus multicaulis, Sm.—Damp, stony places on hills, &c.

Scirpus setaceus, Linn.—Damp roadsides.

Carex dioica, L.—Frenchland Burn.

„ *ovalis*, Good.—Gallowhill, Frenchland Burn.

„ *œderi*, Ehrh.—Common (hill ditches and damp places).

Phalaris arundinacea, L.—River sides.

Anthoxanthum odoratum, L.—Common.

Alopecurus geniculatus, L.— „

„ *pratensis*, L.— „

Holcus lanatus, L.— „

Avena pratensis, L.— „

„ „ var., *Alpina*—Blackshope and Hartfell.

Cynosurus cristatus, L.—Common.

Dactylis glomerata, L.— „

Poa pratensis, L.— „

Glyceria fluitans, R. Br.— „

The following carices and grasses come under the above head, and were gathered by Mr M'Andrew, of New-Galloway, when at Moffat last summer :—

Carex hirta, L.—Frenchland Burn.

„ *paludosa*, Good—Foot of Ellerbeck Burn.

„ *vesicaria*, L.—Earshaig Lakes.

Agrostis alba, L.—Common.

Aira caryophyllea, L.— „

Poa annua, L.— „

Festuca myurus, L.— „

„ *elatior*, L.— „

Bromus giganteus, L.—Moffat Water.

Bromus mollis, L.—Moffat Water.

Agropyron caninum, Beauv.

Of plants which are new records for the County of Dumfries for this season occur the following :—

Fumaria confusa, Jord.—11th July, waste ground at Beattock Station.

Fumaria densiflora, D.C.—11th July, Edgemoor, Johnstone parish. This plant was gathered in August, 1890, but was only named by Mr A. Bennett, Croydon, on the above date.

Hypericum perforatum, var. *angustifolium*, Gaud.—12th August, Wamphray Glen.

Hypericum perforatum, var. *lineolatum*, Jordan—15th August, Barnhill road, &c.

Medicago lupulina, L.—11th July, waste ground at Beattock Station ; gathered by Mr M'Andrew.

Epilobium montanum, L., var. *minus*—Common, rivulets on Blackshope, &c. This plant was also gathered here two years ago by the Rev. Edward F. Linton.

Hieracium gothicum, Fr.—26th July, Well Burn, rare ; and it also occurs in Lanarkshire about a mile from the county boundary.

Vaccinium uliginosum, L.—29th August, Moffat Hills ; elevation from 1800 to 2000 feet ; growing on the mossy soil covering damp rocks, and is not easily recognised growing, as the foliage looks like that of *vaccinium myrtillus* half withered ; the difference is easily seen when a piece of the plant is gathered.

Veronica serpyllifolia, L., var. *humifusa*, Dicks.—19th July, rivulets and spongy places on Whitecoomb, elevation 2000 feet.

Euphrasia gracilis, Fr.—Beattock Hill, common.

Polygonum lapathifolium, L., var. *incana*—8th July, waste ground, Beattock Station.

Polygonum persicaria, L., sub. sp., *Nodosum*, Pers., var. *glandulosum*.—5th August, corn field at Riddings Holm ; plant determined by Mr A. Bennet, Croydon, and is a new record also for Scotland.

Salix triandra, L., var. *Hoffmannia*, Sm.—Annan Water at Putts.

Salix fragilis, L., var. *decipiens*, Hoffm.—Barnhill Bridge.

Salix stipularis, Sm.—Annan Water at Oakriggside.

Salix Smithiana—Wild, Evan Water at Holm Bridge.

Salix aurita × *phylicifolia*—Kerr.

., *herbacea*, var. *fruticosa*—Whitecoomb.

Luzula multiflora—Railway cuttings.

Carex glauca, var. *stictocarpa*—Blackshope.

Festuca loliacea, Huds.—Waste ground at Gas-works, gathered by Mr M'Andrew.

General Note.—These new records and additions to our local and also county flora, given above, confirm what I said in my paper last year, that this district could stand a deal of botanizing

yet, and the same statement still holds good. This year I have observed that several plants which have always been designated as rare in our list can by no means be considered so ; and that when the likely habitat for a plant is known and can be recognised, the plant itself is almost certain to turn up. For instance, *pyrola secunda* has always been considered a rare plant here ; in fact, at its previously recorded stations in this district it has been unknown for years. Last year I came across it in a linn for the first time. It was growing on dry, exposed, chattery rocks, which are covered with scraggy heather and blaeberry bushes, the roots of the *pyrola* growing deep down in the fissures and cracks of the rocks. This year, when botanizing, I came across other places such as that mentioned, and found the *pyrola* growing at every one of them. Four stations can now be given for this plant here, and all of them are situated from 1050 to 1150 feet above the level of the sea.

Polygonum viviparum is another plant which, when once its habitat can be recognised, is found to be common instead of rare. There are other plants again which as yet have only one recorded station, as, for instance, *saxifraga nivalis* and *arctostaphylos uva-ursi*. And I have never come across any other place here which could be taken as a likely habitat or could in any sense be considered as fulfilling the conditions of the original habitat.

Woodsia ilvensis still retains a habitat amongst our hills, but there is no doubt that it is gradually getting scarcer. Two stations are all that have been known here for it in recent years. At one of them it has not been seen for at least two years. At the other I personally observed one solitary specimen, but a very nice healthy one. Mr A. Bennett, Croydon, in his paper before the Society, in February, 1891, gave, amongst others, Mr Stevens' note on this fern, published in 1848, "that it was very abundant and luxuriant on the hills bordering on Dumfriesshire and Peeblesshire, growing in dense tufts, some of the fronds measuring six inches in length." The largest specimen I have seen measured only two inches, most of them being only from $1\frac{1}{4}$ to $1\frac{1}{2}$ inch. And in speaking to a gentleman who has known its habitat for over 40 years, he informed me that he had only come across one specimen of that size many years ago.

I must express my indebtedness to Mr E. F. Linton, Bourne-mouth, and Mr A. Bennett, Croydon, for examining and naming all the plants submitted to them for determination.

II.—*Captain Franck's Tour in Scotland in 1657.* By E. J. CHINNOCK, LL.D., Hon. Secretary. (Abridged.)

A reprint was published by Sir Walter Scott in 1821 of a remarkable book entitled "Northern Memoirs, calculated for the meridian of Scotland, to which is added the contemplative and practical angler, writ in the year 1658, but not till now made public, by Richard Franck, Philanthropus, Plures necat Gula quam Gladius. Printed for the author. To be sold by Henry Mortclock at Phenix in St. Paul's Churchyard. 1694." It consists of a fishing tour through Scotland, described in dialogue between Arnoldus (Franck) and his companion Theophilus. The journey must have taken place in 1656 or 1657, when Scotland was peaceful under the iron hand of General Monk, Cromwell's deputy. Franck had served as a cavalry officer in Cromwell's army during the war in Scotland, and he is addressed by a friend in some commendatory verses as captain. He was an Independent of a mystical kind, as his remarks throughout the book show. He was born at Cambridge, and seems to have been educated at the University, for though his style is very pedantic and obscure, it is that of an educated man of the period. He says he had lived through five kings' reigns, so he must have been born in that of James I., *i.e.*, before 1625. If he were born in 1624 he would have been 70 years of age when he published the book. Near the end of the book Theophilus says: "You writ the book in '58 and spread the net in '85." Arnoldus replies: "What if I do; I lived in the reign of five kings and in the time of four great worthies." Theophilus: "Was O.P. (*i.e.*, Oliver Protector) one?" Arnoldus: "I leave that bone for you to pick. But this I assert, that great English hero was exemplary in piety, eminent in policy, prudent in conduct, magnanimous in courage, indefatigable in vigilancy, industriously laborious in watchings, heroic in enterprise, constant in resolution, successful in war; one that never wanted a presence of mind in the greatest difficulties; all the world owns him for a great general that influenced all Europe, gave laws to all neighbouring nations, and disciplined France with English arms." In the dedication to Mr J. W., merchant, in London, he says: "In Cambridge, it's true, I had my education; but travel having the ascendent over me, I afterwards rambled the remote northern tracts of Scotland, where to admiration I inspected that little artick world and every angle of it. For you are to consider, sir,

that the whole tract of Scotland is but one single series of admirable delights, notwithstanding the prejudicate reports of some men that represent it otherwise. For Scotland is not Europe's *umbra*, as fictitiously imagined by some extravagant wits; no, it's rather a legible fair draught of the beautiful creation, dressed up with polished rocks, pleasant savannas, flourishing dales, deep and torpid lakes, with shady fir woods, immersed with rivers and gliding rivulets; where every fountain overflows a valley and every ford superabounds with fish. Where also the swelling mountains are covered with sheep, and the marish grounds strewed with cattle, while every field is filled with corn, and every swamp swarms with fowl." After a long discussion on religion and politics the two friends, Theophilus and Arnoldus, resolve to undertake a fishing tour through Scotland. Says Arnoldus: "Whither would your fancy direct you?" Theophilus: "Into the very centre and bowels of Scotland." Arnoldus: "What would you propound to yourself there?" Theophilus: "The exercise of the rod, and learn to fish." Arnoldus: "And who shall instruct us?" Theophilus: "Ourselves; who should? You shall be my tutor, and I'll be your pupil." Arnoldus: "If that be your resolution, give me your prospect." Theophilus: "The flourishing fields and the plentiful streams in Scotland." Arnoldus: "Shall we ramble the Highlands?" Theophilus: "Ay, and the Lowlands too." The directions given to the angler are acknowledged to be very valuable, much superior to those given by Isaac Walton, of whom Franck speaks with disparagement. In fact, the book is far more valuable to the angler than to one who is searching for information about the districts traversed by the tourists. After fishing in the Eden and describing Carlisle, Arnoldus says: "It's very true, the river Eden floats near the skirts and the fortifications of Carlisle. But then you must consider there's another river commonly known by the name of Annan (of a more rapid motion, and more resolute streams) which issues from the famous top of Ericstaue, not far from as famous a mountain called Tintan. This Annan glides along the southern marches of Scotland, which afterwards espouseth with the ocean westward, and gives name to a dale commonly called Annan's Dale. But there is another river the natives call Esk which juts just upon Annan, on the Scottish promontories, so tumbles into the sea at N. Nor'west, as near as I can guess at Quaking Sands.

Farewell, Old England ; I shall venerate thy memory and thy fertile meadows, and never forget thy florid fields that glut the scythe, nor thy fragrant gardens that perfume the air." Arnoldus : " And welcome Scotland, I say, for this night I purpose to lodge in Dumfrees. But who must carry our implements and our fish ?" Theophilus : " Let us catch 'em first, and then consider their portage." Arnoldus : " That's but little difficult to do, where every field is accommodated with rivulets, and every rivulet furnished with trouts. As we travel along this mountainous coast of Galloway, look out before you and view those parts ; such are the entrances into the decays of Dumfrees, whose situation and buildings bespeak it spacious, and a town that will furnish us with fish and flesh, where we may stay till to-morrow and solace ourselves with her flourishing streams, whose lofty banks barricade the beautiful *pontus arnotus*, a pleasant portable river below the situation of the town (unplundered of exercise) that will recreate and recruit us with fish enough if the season but serve to experiment the art." Theophilus : " I approve very well of your motion, but a *modicum* first will be very seasonable. Let us summon the cook to know what he's got in the kitchen, and give charge to the chambermaid (if there be such a thing in Scotland) to take care that the windows be decked and adorned with flowers, whilst the boards and floors are strewed with greens ; for I'll examine every thread in our beds to see if they be cleanly washed and thoroughly dried, the better to accommodate us in our northern expedition." In the morning Theophilus says : " Were not complaint a ridiculous orator I would tell you the mutton was small, but good ; but cookery, I persuade myself, never worse contrived ; and the linen was sweet and clean enough, of a modest complexion, but not lavender proof. Then, for their pewter (the like was never seen), it was tarnished with nothing but a face of lead. The beds, I confess, were soft enough ; and, if I don't mistake myself, short enough ; yet every angler may without difficulty resolve how sweetly rest relishes after recreation, and how grateful solace seems after good success." After a fine description of angling in the Nith, Arnoldus is made to say : " In the meantime I'll gratify you with a breviat of Dumfrees, where a provost, as superintendent, supplies the place of a mayor, a magistrate almost as venerable as an English constable. It was anciently a town girt about with a strong stone wall ; but the late

irruptions, or perhaps some State disagreement, has in a manner defaced that regular ornament, otherwise the cankrous teeth of time have gnawn out the impressions, as evidently appears by those ruinous heaps. Nor is the Arnotus in all parts portable, notwithstanding her shores are so delightful. In the midst of the town is their market place, and in the centre of that stands their tolbooth, round which the rabble sit, that nauseate the very air with their tainted breath, so perfumed with onions that to an Englishman it is almost infectious. But the kirk is comely, and situated southward, furnished once a week with moveable spectrums (you know what that means), yet the outside than the inside is more eminently embellished, if sepulchres and tombstones can be said to be ornaments; and where death and time stand to guard the steeples, whose rings of bells seldom or rarely exceed the critical number of three. Here also you may observe a large and spacious bridge that leads into the country of Galloway, where thrice in a week you shall rarely fail to see their maidmankins dance corantos in tubs. So on every Sunday some as seldom miss to make their appearance on the stool of repentance." Theophilus: "Then it seems by your relation they keep time with their commers, that hazard their reputation for a country custom (or the love of liquor) rather than omit a four-hour's drinking." Arnoldus: "That's true enough; and it's an antient practice among the female sex to covee together (about that time) as naturally as geese flocked together to the capitol. Now, the very name of Commer they mightily honour; but that of Gossip they utterly abominate, as they hate the plague or some mortal contagion." The anglers had reason to remember Sanquhar. Theophilus says: "Dangers foreseen are the sooner prevented, and I design to sleep in a whole skin as long as I can. Zanker, farewell! I am glad to see thee behind me, and no need of a chirurgeon. Zanker stands situate on a flat or level, surrounded with excellent corn fields; but more remote it's besieged with mountains that are rich in lead mines, and though the people hereabouts are destitute of ingenuity, and their fields for the most part impoverished for want of cultivation, yet are their rivers and rivulets replenished with trout. Zanker is a town, and a corporation too, though not bulky in buildings; yet there is a bailiff, master sometimes of a brew-house, whose entertainments (in my opinion) may easily be provided you reflect on

our late accommodation. There is also a market-place, such an one as it is, and a kind of a thing they call a tolbooth, which at first sight might be suspected a prison, because it's so like one, whose decays, by the law of antiquity, are such that every prisoner is threatened with death before his trial, and every case-ment, because bound about with iron bars, discovers the entertainment destined only to felons. Now, the market-place is less worthy of a description than the tolbooth, for no man would know it to be such were he not told so. There is also a kirk, or something like it, but I might as reverently call it a barn, because there is so little to distinguish betwixt them, and the whole town reads daily lectures of decay, so do her ports, her avenues, and entrances. It's true I was not murdered, nor was I killed outright, yet I narrowly escaped as eminent a danger when almost worried to death with lice. Kilmarnock is an antient corporation, crowded with mechanicks and brew-houses. Should I step into her dirty streets, that are seldom clean but on a sun-shiny day, or at other times when great rains melt all the muck and forcibly drive it down their cadaverous channels into the river Marr, whose streams are so sullied then that the river loses its natural brightness till the stains are washed out or become invisible. The inhabitants dwell in such ugly houses as, in my opinion, are but little better than huts, and generally of a size, all built so low that their eves hang dangling to touch the earth ; nor are they uniform, nor hold they correspondency one with another ; and that which is worse than all the rest is their unproportionate ill contrivance, because when to consider a dwarf of a house so covered over with a gigantick roof. Their manufacture is knitting of bonnets and spinning of Scottish cloth, which turns to very good account. Then, for their temper of metals, they are without compeer ; Scotland has not better. Glasgow is a city girded about with a strong stone wall, within whose flourishing arms the industrious inhabitant cultivates art to the utmost. There is also a cathedral (but it's very antient) that stands in the east angle, supervising the bulk of the city, and her ornamental posts. Moreover, there are two parish churches, but no more, to the best of my observation. Then there is a college, which they call an university ; but I'm at a stand what to call it, where one single college compleats a university. (Franck was thinking of Cambridge with its eighteen colleges.) You may observe four large, fair streets, modelled, as

it were, into a spacious quadrant, in the centre whereof their market-place is fixed, near unto which stands a stately tolbooth—a very sumptuous, regulated, uniform fabric, large and lofty, most industriously and artificially carved from the very foundation to the superstructure, to the great admiration of strangers and travellers. But this state-house, or tolbooth, is their western prodigy, infinitely excelling the model and usual build of town-halls, and is, without exception, the paragon of beauty in the west, whose compeer is nowhere to be found in the north, should you rally the rarities of all the corporations in Scotland. In the next place, we are to consider the merchants and traders in this eminent Glasgow, whose store-houses and warehouses are stuffed with merchandise, as their shops swell big with foreign commodities, and returns from France and other remote parts, where they have agents and factors to correspond, and enrich their maritime ports, whose charter exceeds all the charters in Scotland, which is a considerable advantage to the city inhabitants, because blest with privileges as large, nay, larger, than any other Corporation. Moreover, they dwell in the face of France and a free trade, as I formerly told you. Nor is this all, for the staple of their country consists of linens, friezes, furs, tartans, felts, hides, tallow, skins, and various other manufactures and commodities not comprehended in this breviat. Besides, I should remind you that they generally exceed in good French wine, as they naturally superabound with fish and fowl—some meat does well with their drink. The very prospect of this flourishing city reminds me of the beautiful fabrics and the florid fields of England. How many such cities shall we meet with in our travels where the streets and the channels are so cleanly swept, and the meat in every house so artificially dressed? The linen, I also observed, was very neatly lapped up, and, to their praise be it spoke, was lavender-proof. Besides, the people were decently dressed, and such an exact decorum in every society represents it, to my apprehension, an emblem of England. I'll superscribe it the nonsuch of Scotland, where an English florist may pick up a posie.”

III.—*Leach's Petrel (Procellaria Leachii).*

By Mr JOHN CORRIE.

A specimen of this scarce petrel was found dead in a meadow near Monybuie, Kirkcudbrightshire, on 2nd November. The measurements were:—Length, eight inches; expanse of wings,

one foot six inches. The bird was picked up by Mr William Beattie, gamekeeper to Dr Dickson, 3 Royal Circus, Edinburgh, who is proprietor of Monybaie, and forwarded to me for confirmation. The little wanderer bore evident marks of exposure, and it seems probable that it had been blown inland by the gales of the 15th and 17th October.

IV.—*Shortbread at the Lord's Supper.*

Dr Chinnock stated that he had made enquiries regarding the use of shortbread at the communion, which the Rev. J. H. Thomson, Hightae, had stated at last meeting prevailed in the north of Ireland, and he had received the following reply from Dr Robert Ross, of Londonderry :

Shortbread is used by my congregation, and I believe by all the other Presbyterian congregations in this city, at the Lord's Supper. This has been the custom from time immemorial. The reason why shortbread is used at the Lord's Supper is not that the Jews used unleavened bread at the Passover, but it is in conformity to our Lord's example in using unleavened bread when he instituted the sacrament of the Supper. It is certain that He used the bread they were eating when observing the Passover, and that was unleavened bread. The Presbyterians here would not sanction any departure from the rule of strict conformity to his example when that is clearly known ; and "leaven" in Scripture usage is the symbol of "hypocrisy" or "malice," in a word of "evil," which permeates society as "leaven" does the substance with which it is mixed. Unleavened bread then is the symbol of purity, sincerity, charity, and is therefore used by the Presbyterian churches here at the Lord's Supper. Our Lord's parable of "leaven" hid in three measures of meal is an exception to the general rule of Scripture usage. In the parable it is the symbol of life—life multiplying with great rapidity and causing what we call fermentation. I have no doubt but that the custom is adhered to by the churches here on the ground of conformity to our Lord's example, and of the spiritual import of "leaven" regarded as a symbol.

Mr Thomson stated that he had a letter from the Rev. Mr Weir, who regretted that he was not able to be present, and who enclosed a number of letters on the subject. He had also some other letters, of which he proposed to submit a synopsis to another meeting. Mr Weir had written to Dr Sprott of North Berwick, one of the chief authorities in the Established Church, but he was not able to give any information on the subject. The Rev. Jardine Wallace, Traquair, wrote :

Shortbread was used in St. Michael's Church, Dumfries, up to November 20, 1864, when my father, Dr Wallace, died. I remember the

circumstance well, for I took the opportunity of saying to some of the elders of St. Michael's, after my father's death, that they should now make use of common loaf bread in the communion. My reason for doing so was chiefly that shortbread is very brittle and inconvenient to handle. The cakes were large and round, with a dividing line down the centre and also across, in order to assist the officiating clergy in breaking. But strangers who assisted my father at such times were often afraid to touch the bread in case of an accident.

Rev. Mr Fraser, of Colvend, had written an interesting letter. He said :

When I came here, now forty-seven years ago, shortbread was the bread used in all the surrounding parishes, and in the parishes in the Stewartry generally. It was certainly used in Colvend, Buittle, Urr, Kirkgunzeon, Parton, Corsock, and Kirkbean and Newabbey. Mr M'Lelland, my oldest elder, tells me that about the year 1848 he was present in Dr Wardlaw's Church, Glasgow, and that the bread used was shortbread. Dr Wardlaw, as you know, was a Congregationalist. This, I think, is an interesting fact, and shows that the custom was not confined to Galloway or to congregations of the Established Church. I had an interesting conversation with Mr John Paterson, baker, Dalbeattie, whose father used to supply shortbread to several of the surrounding parishes for the communion ; and his impression is that in his father's time shortbread was universally used throughout the Stewartry. The ministers and elders of Galloway in the last century were of a stern and unbending character, and would probably oppose any change in the bread of the communion, hence, perhaps, the continuance of the custom so long in this quarter.

In a second letter Mr Fraser said :

Mr Dunlop, my assistant, himself an Irishman, tells me that he communicated some 10 or 12 years ago in Duncairn Church, Belfast, the minister of which at the time was the Rev. Dr Killen, and that the bread used was shortbread. I asked if Dr Killen was a Scotchman, thinking that he might have imported the use of shortbread from Scotland ; but it appears he was Irish. But, then, the Presbyterians in Ulster are mainly of Scotch descent ; they might have brought the use of shortbread with them at their immigration.

Rev. Mr Sturrock, Corsock, had written a letter, in which he stated that he wished to introduce a change, but was prevented by one of his elders. Rev. R. Moreson, Kintail, Strome Ferry, wrote that there was no tradition there as to the use of any kind of bread at the communion except the ordinary wheaten loaf, which, in the recollection of the oldest inhabitant, used to be got all the way from Inverness. Mr Thomson stated that he had written to the Rev. Dr Goold, who had never heard of the use of shortbread until he mentioned it to him. He (Mr Thomson) suggested that it was just possible that it was a relic from the

Celtic Church. The great German or Frisian invasion ended somewhere about Lockerbie, and entirely heathenised the country that had been Christianised under Roman rule, and he supposed it remained heathen until the arrival of Mungo in the beginning of the seventh century. He came as a missionary from the Roman Church, and introduced Roman methods, but the Celtic Church retained the older methods. He was supposing that the Celtic Church would be confined to Galloway, or to Portpatrick or Loch Ryan; that in that district it remained strictly Celtic.

Rev. John Cairns remarked that Mungo would be as pure as any of the missionaries. Ninian came from Rome, but not Mungo.

Mr Thomson said he assumed that Galloway remained under the influence of the Celtic Church.

Dr Chinnock observed that the prevalence of the custom among the Presbyterians of Ulster would seem to show that when they immigrated it was universal in Scotland.

Mr Thomson mentioned, in conclusion, that the use of short-bread had been given up at Portpatrick since he carried away the cakes.

Mr Barbour, architect, said he had information that it was in use in Kells until twelve years ago and in Dalry until four years ago.

7th January, 1892.

Mr THOMAS M'KIE, V.-P., in the chair.

Election.—Mr James Gibson Hamilton Starke, advocate, was elected Vice-President in the room of Major Bowden, deceased.

Donations.—Transactions of the Canadian Institute of Natural Sciences, Toronto; Journal of the Elisha Mitchell Scientific Society, North Carolina; Journal of the Botanical Society of Edinburgh, April–July, 1891.

COMMUNICATIONS.

I.—*A Contribution to the Cryptogamic Botany of the Moffat District.*
By Mr JAMES M'ANDREW, New-Galloway.

As the Moffat district is fairly representative of the sub-alpine portion of Dumfriesshire, its flora has received considerable attention, and therefore any further lists of its plants—whether

Phanerogamic or Cryptogamic—cannot but prove interesting. This district is extensive, and requires continuous and hard labour to work up its flora. Though in variety of surface and in humidity of climate—conditions favourable to cryptogams—it is inferior to such districts as the Glenkens, yet it contains a greater number of sub-alpine species of plants. A continued residence is necessary to know the Cryptogamic botany of a district, and therefore a holiday of a few weeks at Moffat in last July, 1891, cannot pretend to be sufficient to exhaust the flora of the district, more especially as my rambles were almost confined to the vicinity of the town. I visited, however, the Grey Mare's Tail, the Beef Tub, Garpel Glen, Beld Craig Glen, the Cornell Burn, and the Well Burn. In these places, and on the Gallow Hill, I found most of the Cryptogams noted below. Lists, more or less full, of the Cryptogamic plants of Moffat have been made by Dr. W. Nichol, Mr John Sadler, and Mr James Cruickshank, and the results of their labours have been nearly all embodied in my lists of Mosses and Hepaticæ in the last Volume of the Transactions of the Society. The following lists are supplementary to those already given, and are not understood to be exhaustive. I am sorry that my researches at Moffat have enabled me to add but one single new moss to the district, viz., *Dicranum spurium*, on the south slope of the Well Hill. I may add that the prevailing rocks of the district are Greywacké and the new Red Sandstone.

The following Mosses are new records for the Moffat district:—

Sphagnum acutifolium vars. *purpureum*, *rubellum*, *tenuè*, and *elegans*; *S. squarrosum*, *cuspidatum*, *rigidum*, *subsecundum* and var. *contortum*, *tenellum*; *Andræa petrophila*, *alpina*; *Weissia viridula*, *cirrhata*; *Dichodontium pellucidum*; *Dicranella squarrosa*, *cerviculata*; *Dicranum fuscescens*, *scoparium* var. *paludosum*, *majus*; *Campylopus flexuosus*, *fragilis*, *pyriformis*; *Leucobryum glaucum*; *Pleuridium subulatum*; *Seligeria pusilla* (Cornell Burn); *Blindia acuta*; *Pottia truncata*; *Didymodon flexifolius*, *cylindricus*; *Ditrichum homomallum*; *Trichostomum mutabile*; *Barbula muralis*, *unguiculata*, *fallax*, *rigidula*, *revoluta*, *convoluta*, *tortuosa*, *subulata*, *ruralis*; *Ceratodon purpureum*; *Grimmia apocarpa* and var. *rivulare*, *trichophylla*; *Rhacomitrium aciculare*, *Sudeticum*, *heterostichum*, *fasciculare*, *canescens*; *Ptychomitrium polyphyllum*; *Zygodon viridissimum*; *Ulotia Bruchii*, *phyllantha*; *Orthotrichum affine*, *stramineum*, *Lyellii*, *leioarpum*; *Splachnum ampullaceum*; *Entosthodon Templetoni*; *Bartramia ithyphylla*, *Halleriana* (Cornell

Burn) ; *Webera nutans*, *cruda*, *annotina* ; *Bryum bimum*, *alpinum*, *cæspiticium*, *argenteum*, *capillare*, *pseudo-triquetrum* ; *Mnium affine*, *undulatum*, *rostratum*, *hornum*, *punctatum* ; *Aulacomnium palustre* ; *Tetraphis pellucida* ; *Atrichum undulatum* ; *Polytrichum gracile*, *formosum*, *strictum* ; *Diphyscium foliosum* ; *Fissidens bryoides*, *osmundoides*, *decepiens*, *adiantoides* ; *Cinclidotus fontinaloides* (Moffat Water) ; *Fontinalis antipyretica*, *squamosa* (Moffat Water) ; *Leucodon sciuroides* (Frenchland Burn Bridge) ; *Antitrichia curtispindula* (Moffat Spa Well) ; *Neckera pumila*, *complanata* ; *Homalia trichomanoides* ; *Leskea polycarpa* ; *Isothecium myurum* ; *Homalothecium sericeum* ; *Brachythecium albicans*, *rivulare*, *populeum*, *plumosum* ; *Eurhynchium myosuroides*, *striatum*, *crassinervium*, *piliferum*, *Swartzii*, *prælongum* ; *Hyocomium flagellare* (Hind Gill) ; *Rhynchostegium depressum* (Cornell Burn), *confertum*, *ruscifolium* ; *Plagiothecium pulchellum* ; *Amblystegium serpens*, *fluviale* (Hind Gill) ; *Hypnum exannulatum*, *revolvens*, *fluitans*, *uncinatum*, *filicinum*, *commutatum*, *falcatum*, *cupressiforme* and vars. *tectorum* and *filiforme*, *patientia*, *molluscum*, *palustre*, *ochraceum*, *stellatum*, *cordifolium*, *cuspidatum*, *Schreberi*, *purum*, *stramineum*, *scorpioides*, *splendens*, *brevirostrum*, *squarrosum*, and *loreum*—143.

The following Mosses also occur in the Moffat district, but from their commonness they have not been so located in my previous list :—

Sphagnum acutifolium and *cymbifolium* ; *Andreaea Rothii* ; *Dicranella heteromala* ; *Grimmia pulvinata* ; *Rhacomitrium lanuginosum* ; *Funaria hygrometrica* ; *Bryum filiforme* ; *Pogonatum aloides* ; *Polytrichum piliferum* and *commune* ; *Hedwigia ciliata* ; *Thuidium tamarascinum* ; *Climacium dendroides* ; *Plagiothecium undulatum* ; *Hypnum sarmentosum*.

The following rare and sub-alpine species require re-discovery :—

Hypnum crista-castrensis, *Hypnum rugosum*, *Gymnostomum curvirostrum*, *Ditrichum flexicaule*, *Limnobium eugyrium*, and *Hypnum hamulosum*, recorded from the Grey Mare's Tail ; *Gymnostomum ovatum* (*Pottia cavifolia*), from Whitcomb ; *Arctoa fulvella*, from Hartfell ; and *Encalypta ciliata*, *Zygodon lapponicus*, and *Pseudoleskea catenulata*, from Black's Hope Burn.

The four following Mosses were omitted from my previous list :—

66. *Dicranum longifolium*, Maidenbower Craigs, in Kew Herbarium. (Dr Braithwaite in "Moss Flora.")

114. *Gymnostomum ovatum* (*Pottia cavifolia*), Moffat. (Mr John Sadler.)
 137. *Ditrichum flexicaule*, Grey Mare's Tail. (Dr W. Nichol.)
 531. *Drepanium hamulosum*, Grey Mare's Tail. (Dr W. Nichol.)

HEPATICÆ.

The Moffat glens and the Gallow Hill are the most productive spots for Hepaticæ in the Moffat district. Among my gatherings I have added no new species of Hepaticæ, but the following are new records for the Moffat district :

Marchantia polymorpha ; *Preissia commutata* ; *Frullania dilatata* and *Tamarisci* ; *Lejeunea serpyllifolia*, *patens*, and *flava* ; *Radula complanata* ; *Porella levigata* and *platyphylla* ; *Lepidozia reptans* ; *Odontoschisma sphagni* ; *Cephalozia divaricata*, *curvifolia* (Gallow Hill and Beld Craig Glen), *connivens* (Gallow Hill), *catenulata* ; *Lophocolea bidentata* ; *Chiloscyphus polyanthos* ; *Saccogyna viticulosa* ; *Kantia trichomanis* ; *Trichocolea tomentella* ; *Blepharozia ciliaris* (Well Hill) ; *Anthelia julacea* ; *Scapania compacta*, *undulata*, *resupinata* ; *Diplophyllum albicans* ; *Plagiochila asplenioides* ; *Aplozia genthiana* and *riparia* ; *Lophozia attenuata*, *Flærkii*, and *ventricosa* ; *Gymnocolea inflata* ; *Sphenobolus minuta* ; *Nardia scalaris* ; *Blasia pusilla* ; *Metzgeria conjugata* ; *Scapania umbrosa*—39.

Plagiochila spinulosa has also been recorded from Moffat, though not so stated in my list. *Nardia Müllerii* from Hartfell, and *Plagiochila tridenticulata* from the Grey Mare's Tail, require re-finding.

LICHENS.

The following are a few new records of Lichens for the Moffat district :—

Ephebe pubescens ; *Coniocybe furfuracea* ; *Bœomyces rufus* ; *Cladonia pyxidata*, *gracilis*, *furcata*, *pungens*, *squamosa*, *digitata* ; *Cladonia sylvatica* ; *Stereocaulon paschale* and *coralloides* ; *Evernia furfuracea* (Gallow Hill) ; *Ramalina calicaris*, *farinacea*, *fraxinea*, and *fastigiata* ; *Platysma sæpincola* var. *ulophylla* ; *Peltigera aphthosa*, *canina*, *polydactyla*, *scutata*, and *horizontalis* ; *Parmelia caperata*, *perlata*, *fuliginosa*, *saxatilis*, and its var. *revoluta* ; *Physcia pulverulenta* ; *Borreria tenella* ; *Amphiloma lanuginosum* ; *Lecanora subfusca* ; *Pertusaria communis*—33.

II.—*The Study of Antiquity considered as a Pleasant Pursuit.*

By Mr PHILIP SULLEY, F.R.Hist.S.

After a brief introductory reference to the fascination of the study of archæology, Mr Sulley proceeded :—In the matter of

stone relics of all periods we are well favoured. A walk up the right bank of the Nith, past Ellisland—home of Britain's chiefest songster—past Friars' Carse, brings you to a very perfect and fine stone circle, on an eminence. Here, round a circle of more than 100 yards in girth and 35 across, are set up 38 stones, mostly of hard greywacke or whinstone, 5, 6, and 7 feet in height from the ground, and doubtless as much buried below. In the centre, straight in line with the entrance, which is marked by a single outlier, as the slope of the hill does not admit of an avenue, is a large pillar over six feet high, and massive, which has every appearance of careful trimming. In line with these again is the altar stone, a great flat-topped boulder, in an embayment at the south. Behind, but without the circle altogether, is a small trench, nearly square, surrounded by six smaller stones, laid flat. Nearly in line between the centre stone and the altar is the most extraordinary stone I have ever seen in these places. It is 23 inches by 16 across, and the whole of the centre has been carefully hollowed out, clean through its depth of eight inches. It most certainly is a socket, but for what purpose or why a temporary upright stone should be set in it at that point in the circle is a matter quite beyond my limited knowledge. But now, what is it? A temple—a burial ground? Is there a single person breathing who could go to that weird, quiet spot among the fir trees and not feel stirred with wonder and amazement at this prehistoric relic? How, in those far-off days, when mechanical appliances were unknown, when roads and means of transport were of the rudest, were these great stones brought from a distance and set up here? For the stone is not local. Who were the people? Were they, as for centuries was believed, the Druids, those highly coloured people of the British or Gaulish tribes, whom the Romans knew and conquered? Or were they, as many now believe, an earlier race of short, swarthy men, like the Huns, who roamed and hunted and fought and feasted, clad in the skins of wild beasts, and whose skeletons we sometimes find fossilised in the alluvial sandstone? If so, what mighty chief lies buried here, huddled up with knees touching chin, as was their fashion in burial, with his rude flint weapons beside him? What had he done so great or noble, or so powerfully wicked, that his tribe should spend long weary weeks in raising such a stupendous memorial—to serve in

after times as the temple and place of sacrifice of the more enlightened Gauls, who doubtless invaded and dispossessed them, hunting them down and exterminating, as has been the custom from all time till now? Here surely is material enough for pleasant and instructive speculation, to be followed up by investigation of other and ruder circles, such as the Twelve Apostles of Holywood, the circle on the roadside near Lochrutton, or the very rude one at the Holm, near Carsphairn, where giant boulders have been roughly set round a low mound. Circles alone do not exhaust this class of relics. Single standing stones are numerous, and probably later, representing the site of battles or skirmishes. Food enough for speculation, but antiquity has its surprises, its discoveries. A few strokes of the spade, an uncovering of the primeval face of the rock, and lo! traces of a time even earlier than any yet mentioned are seen in the cup-and-ring markings, found a few years ago on the farm of Banks, near Kirkcudbright. Existing all over Asia, in use in India and Persia to the present day, found in a few places in Europe, in part of America, and in Australia, if they prove anything, it must be the existence of a common religion in these places—a religion which was allied to a civilisation far in advance of anything known or traced among the other inhabitants of these countries, at all events until the Roman conquest. By what vast cataclysm, by what deluge or change of climate, was this ancient race wiped out, and the traces of their worship, extending over whole acres, covered up by the soil for thousands of years? What was the attraction about Galloway that it should be their shrine, their holy ground? Nearing better known times, we may trace out the many old forts and camps which dot this country in all directions. Here, on a hill top, is a vitrified fort, or circular British camp. There, on the slope below, one of those marvellous earth-works, whose straight and regular lines, orderly disposition, and arrangement prove at a glance that none but the all-conquering Roman, that inflexible despiser of curves and irregular angles, could have produced them. Surely a visit, on a fine day, to the summit of Burnswark, with its unrivalled views and camps, must effect an immediate conversion to antiquarian pursuits and a firm belief in its pleasures. Then there are the moats, camps of refuge, or places of meeting—no one seems clear as to their precise nature, nor whether their origin

is due to the Danes or fear of the Danes—all worthy points left open to the newest student to determine, for our hobby affords a glorious field at all times for discoveries, or supposed discoveries. If they turn out mare's nests it does not matter. They admit of elaborate statement on the one side and fulminating refutation on the other, in elegant language and unlimited verbosity. I think enough has already been said to prove my case, and to shew to the section of this Society which is *not* antiquarian, and to outsiders, that this study or science is not dry as dust, but pleasant and healthy and mildly exciting. But if there be any still unconverted, let me direct his attention to religion, to its outer signs and tokens of old time. The lonely rude old cross on the hillside, the cave where the earliest pioneer, saint, martyr too often, or hermit took up his abode and taught the Word to heathen people or set an example of self-denial to their successors. The ruined walls of the small chapel, the remains of the stately abbey—all these the antiquary seeks out in his pilgrimage; and, while his eye notes their styles, whether rude and simple or grand with sculptured stone and ornament, his mind brings back the days of old, when saint or monk preached in open air to the assembled hinds and shepherds, or when through stately fane and aisle noble music swelled as the procession passed along with gorgeous vestments, jewelled crosses and censers, at the great festivals, or when the neighboring lord and patron brought his bride for church's blessing, his gifts for church's aggrandisement, or his corse was borne to church's keeping. No one can go to the stately and beautiful ruins of Dundrennan, to Sweetheart's massive pile, or to charming and picturesque Lincluden, without his mind and feelings being stirred as he thinks of them as they were and as they are: how noble and rich once, deemed worthy for the tombs of Scottish queens; and now how fallen and decayed, yet beautiful—standing records, engraved pictures on the pages of national history, plainly telling their tale of origin, of growth, and fall, and their causes to all who will open eyes and mind. History and antiquity are own sisters in blood, alike in taste and feelings. Nowhere do they more nearly approach, more closely coalesce, than in all connected with warfare, with siege and defence. As we have seen, the dwellers of old time sought refuge behind earthen ramparts. With increased art and resources followed the erection of keeps, peel towers, and castles. In this border

country, full of powerful and fierce barons and clans, these are numerous and interesting. Take a fine type, Comlongan, that massive tower, strong and stern, with walls so thick that numerous small apartments could be set in them, yet at the same time handsome, well built, and a pleasant feature in the landscape. Think of the border troops that have sallied through its portals bent on raids and cattle lifting; and of the time when the raiders themselves were raided, and the country side, alarmed by watchword or beacon fire, flocked towards their strong tower of refuge, driving their cattle to the shelter of the lower hall. If the foeman proved too keen and eager, and ventured to storm the stronghold, what flight of arrows from loophole and battlements, what shower of stones, molten lead and boiling water poured through the machicolations of the roof! A warm reception truly! Look beyond to quieter days, and see another Peel Tower, transformed by additions and extensions into a secure and pleasant manorial residence, a veritable chateau. Such, indeed, is Amisfield, a place most worthy of a visit. To turn the gaze higher, to lords and nobles, what of Carlaverock, that noble pile, unique in shape and position, which yet shews how goodly were the apartments of its chiefs, how strong its defences before the advent of cannon, when for three days a tiny garrison of sixty set at defiance the mighty army of the English Edward. What banquets and tournaments, what scenes of love and gallantry, what fierce combats—even cruel murders, have its old walls looked upon, until the time when an unrelenting army of Covenanters, allied to English Roundheads, proved that strong walls were no longer sure, and that new defences must be sought to withstand powder and shot, and left it, lone and shattered, a silent record of former grandeur and ancient strength.

III.—*The Mound at Little Richorn, Dalbeattie.*

By Mr FREDERICK R. COLES (Tongland).

On Friday, 24th April, 1891, a so-called moat on the above-named farm was partly opened under the supervision of Mr Wellwood Maxwell, F.S.A., of Kirkennan, Mr Thomas Fraser, Mr Kerr, and myself.

The mound is 25 feet above sea-level, washed by the tidal river Urr on the west, and rather deeply trenched on the other three sides. It consists chiefly of blue and yellow clays. A small

stream skirts the S side. The general contours and slopes are remarkably smooth and soft, extremely unlike any other mote or fort in the Stewartry. A section, 18 feet long N. and S. and 5 feet deep at the centre of the mound, was made. This laid bare a long strip of "wall," composed of granite boulders, which was traced round the S., the E., and part of the N. sides; the stones being laid at an outward incline of about 25°, and having an average breadth of 6 feet. On the N. side there was a space of 75 feet entirely free from stones, and no stones were found at any level on the river (*i.e.*, the west) side of the mound. The inside plumb-depth of this "wall" of boulders reached three feet near the east trench. There were no stones found anywhere on the outer scarp of the trench.

On the next day numbers of small, tube-like fragments of "concretions of iron, taking curiously imitative forms," were found in the blue clay near the centre of the mound. Dr Munro (one of the Hon. Secs. of the Soc. Antiq. Scot.) examined these on the spot, and recognised them to be similar to fragments found in sandbeds at Glenluce.

A short section of 9 feet was subsequently made at right angles to the main cutting, and the clay, at several points here, probed to a depth of 9 feet. Nothing, however, was found of any interest.

Two days after, the excavation was stopped. In the face of such a partial exploration scarcely any useful conclusions can be drawn. To the majority of those present (including Dr Munro) the mound seemed to be a mote or a fort, *i.e.*, a place of defence. This theory is based on the following arguments:

1. That the boulder wall disclosed was partly a foundation, originally nearly level, perhaps.
2. That on this there may have been a turf or other wall, with palisades of wood on the top of it.
3. That if it were not a mere foundation this wall was a retaining wall.
4. That the huge central mound was made for the sake of height, and therefore strength and advantage above the river.

As against this theory of the mound being a forte or mote, it is to be noticed:—

1. That the wall of boulders keeps a regular and uniform fall of 1 in 2 at all points, that in some parts it is only 9 or 10 inches

deep, at others over 3 feet. If it were a mere foundation, why should it slope consistently outwards and downwards?

2. If a retaining wall, may it not as well have protected something within as have been intended to keep the overlying clay from rolling? Clay, of all natural substances, is self-supporting enough.

3. The huge mass of clay thins away so evenly into a rounded summit that I cannot think—even allowing for ploughing, &c., &c.—it could have afforded space enough for the occupants of a fort.

4. The absence of the boulder wall on the river-side and all round the outer scarp surely denote that the intention of the builders of this mound was not warlike or defensive. If not a fort, I think the evidence leans towards the conclusion that this was a grave-mound. Stress must be laid upon the nature and position of the wall of granite boulders together with the depth of the trench. The latter, when probed along the centre of the N. side, showed that there was a mass of forced soil 4 ft. 6 in. deep above its original level and 6 feet deep at the due E. centre of trench. The tide, no doubt, once easily filled this trench, and was used, possibly, to lave the tomb of some hardy Norseman who had pointed his prows up the Urr eight hundred years ago—who knows?

Of Norse occupation there is ample evidence, and the form and nature of this mound are extremely similar to those of one figured in Du Chaillu's "Viking Age."

The notion that the boulder wall may have been thus a sort of breakwater is shared with me by others well able to judge of stone work—one of them a practical mason.

Take it all in all—size, form, contours, composition, site, and peculiarities—this Mound at Little Richorn may, on complete excavation, prove to be what I have suggested, a Norse Grave-Mound.

5th February, 1892.

Mr JAMES BARBOUR, V.-P., in the chair.

New Member.—Dr Matthias, Nunholm.

Donations.—Seven numbers in Botany of the Transactions of the Linnæan Society for 1891, and two numbers in Zoology, pre-

sented by Mr Robinson Douglas, M.A., F.L.S., of Orchardton ; Essex Field Club, July to November, 1891 ; Transactions of the Stirling Natural History and Archæological Society.

COMMUNICATIONS.

The following table of Meteorological Observations, taken at Dumfries during the year 1890, was omitted last year :

Months.	BAROMETER.				Self-Registering Thermometer in shade.						RAINFALL.				HYGRO-METER.		Temperature of Dew-Point.	Relative Humidity (Saturation=100).
	Highest in Month.	Lowest in Month.	Monthly Range.	Mean for Month.	Maximum.	Minimum.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean Temp. of Month.	Days on which it Fell.	Heaviest in 24 Hours.	Total Amount.	Mean Dry.	Mean Wet.			
	Inches.	Inches.	Inches.	Inches.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	Ins.	Ins.	Ins.	Deg.	Deg.	Deg.	Deg.	
1890.	30.300	28.755	1.545	29.086	47	36.8	51.7	37.2	41.9	25	0.97	5.32	5.32	41.6	40.2	38.4	89	
Jan.	30.724	29.490	1.234	30.249	43.1	32.8	51.1	27.1	37.9	7	0.37	0.86	0.86	36.3	35.2	33.6	89	
Feb.	30.550	29.045	1.505	29.750	49.8	36.8	58.2	24	34.2	19	0.42	2.19	2.19	42.6	40.8	38.7	86	
Mar.	30.328	29.223	1.035	29.537	54.4	36.3	64.2	27	37.2	14	0.30	1.27	1.27	43.8	40.7	37.1	78	
April	30.392	29.421	0.881	29.837	62.8	45.1	75.2	35.4	39.8	14	0.85	3.14	3.14	52.4	48.7	44.9	75	
May	30.388	29.230	1.158	29.914	62.9	48.2	69.7	35.5	34.2	22	0.67	3.58	3.58	55.1	52	49	80	
June	30.275	29.397	0.878	29.834	64.7	49.2	71.5	42.3	29.2	22	0.72	3.53	3.53	56	53	5.2	81	
July	30.262	29.141	1.121	29.810	65.7	47.8	74.5	38.6	35.4	21	0.62	3.57	3.57	55.9	52.9	50.1	81	
Aug.	30.503	29.450	1.053	30.042	66.4	50.2	74	35.7	38.3	17	0.52	2.86	2.86	56.7	54.8	52.8	86	
Sept.	30.500	29.360	1.140	30.014	56.1	43	63	23.7	39.3	14	0.46	1.50	1.50	48.3	46.3	44	86	
Oct.	30.353	28.600	1.753	29.742	47.7	35	57.4	34.1	41.4	22	2.17	6.93	6.93	40.9	39.8	38.8	93	
Nov.	30.515	29.240	1.275	30.000	36.6	30.4	51	19	33.5	8	0.47	0.97	0.97	33.6	32.5	30.5	88	
Dec.	30.724	28.000	2.124	29.899	54.4	40.9	75.2	19	56.2	208	2.17	35.72	35.72	46.9	44.7	42.3	84	
Year																		

Directions of the Wind during the year.

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Var.
22	32	38	26	24	118	47	43	15

I.—The Meteorology of Dumfries for 1891.

By Rev. WM. ANDSON, V.-P.

Lat. 55° 4' N. Long. 3° 38' W. Height above sea level 60 feet.

Months.	BAROMETER.					Self-Registering Thermometer in shade.					RAINFALL.				HYGRO-METER.		Temperature of Dew-Point.	Relative Humidity (Saturation=10).
	Highest in Month.	Lowest in Month.	Monthly Range.	Mean for Month.	Inches.	Highest in Month.	Lowest in Month.	Mean Maximum.	Mean Minimum.	Monthly Range.	Mean Temp. of Month.	Hottest in 24 Hours.	Total Amount.	Days on which it Fell.	Mean Dry.	Mean Wet.		
1891.																		
Jan.	30.781	29.950	1.531	30.41	30.741	49.2	17.5	41.1	30.9	31.5	36	0.52	2.80	16	35.7	34.7	32.8	88
Feb.	30.673	29.893	0.780	30.387	30.780	69.7	24.5	49.5	31.1	36.2	41.8	0.06	0.23	9	39.2	38.1	37	92
Mar.	30.215	29.126	1.089	30.015	29.777	60	27	50.9	33.3	42.6	38.4	0.92	1.97	13	37.1	35	32.1	82
April	30.490	29.416	1.030	30.290	29.777	78	26	58.6	39.3	52	49	0.72	1.82	13	42.2	39.3	35.8	79
May	30.405	29.260	1.030	30.290	29.777	78	26	58.6	39.3	52	49	0.82	2.28	17	48.1	44.6	40.5	76
June	30.303	29.445	0.844	30.058	29.777	83.4	41	68.2	49.4	42.4	58.8	0.49	1.59	11	58.5	53	48.1	69
July	30.393	29.445	0.948	29.881	29.881	74.5	46	67.7	51.3	38.3	59.5	0.54	1.61	13	58.6	54.3	50.5	75
Aug.	30.089	29.041	1.048	29.090	29.090	71.5	39	64.5	50.6	32.5	57.2	1.01	7.17	25	50.6	53.7	50.7	83
Sept.	30.184	28.992	1.192	29.805	29.805	82	34.8	64.2	47.8	47.2	56	0.90	4.51	21	54.5	52.4	50.5	86
Oct.	30.725	28.397	2.328	29.651	29.651	69.6	28.8	54.8	40.5	30.8	47.6	1.06	1.37	22	45.9	44.5	43.3	89
Nov.	30.717	28.380	2.337	29.779	29.779	54	25	46.4	35.6	29	41	0.64	4.27	17	40	39	37.7	92
Dec.	30.623	28.714	1.909	29.785	29.785	54	23.8	43.8	34.7	30.2	39.2	0.84	6.24	20	39	38	36.7	92
Year.	30.781	28.380	2.401	29.892	29.892	83.4	11.4	54.6	40	70	47.3	1.06	42.92	200	46.3	43.9	41.3	83

Directions of the Wind during the year.

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Var.
22	41½	30½	28½	39½	98	53½	34	17½

During the past year, as in previous ones, the observations of the barometer have been taken twice a day, at 9 A.M. and 9 P.M. ; those of the self-registering thermometer (maximum and minimum) at 9 P.M. for the preceding 24 hours ; those of the rainfall every

morning at 9 ; and those of the hygrometer and wind twice a day, at 9 A.M. and 9 P.M. The instruments were inspected by Dr Buchan, secretary of the Scottish Meteorological Society, on 10th August last, and on being compared with his standard barometer and thermometer were found to retain their former accuracy.

Barometer.—The highest reading of the barometer in 1891 occurred on the 14th January, when it rose to 30·781 inches ; the lowest was recorded on the 11th November, when the reading was 28·380 inches, giving an annual range of 2·401 inches. The mean pressure for the year (reduced to 32 deg. and sea level) was 29·892 inches, which is about the average. The highest monthly mean was in February, with a record of 30·380 inches. There were only three days in that month in which the barometer fell below 30 inches ; the lowest being 29·893 inches, and, as might have been expected, the weather was exceptionally fine and settled for the season, with a rainfall of less than a quarter of an inch, and more than the average amount of sunshine, although accompanied at times by a good deal of haze or fog. The lowest barometrical monthly mean was 29·651 inches in October, and the next lowest, 29·690 inches in August ; and it is worthy of note that these were the months in which the heaviest rainfalls occurred, October shewing 8·37 inches and August 7·17 inches. It is seldom that the barometer falls below 29 inches, but this happened in each of the four last months of 1891—once in September, once in October, once in November, and twice in December—and not in any of the previous months. The depression of the 11th November, 28·380 inches, was not only the lowest of the year, but the lowest recorded at this station since the great storm of 8th December, 1886, when the barometer fell to 27·61 inches. And from a paragraph in *Nature* by Mr G. J. Symons, of the English Meteorological Society, I see that in London it has been exceeded only five times in the past 34 years, to which his observations extend. The depression of the 13th October, 28·397 inches, was nearly as low, and both of them were accompanied by exceptionally stormy and unsettled weather. This was the character indeed of the whole of the first three weeks of the latter month, there having been only one day between the 1st and the 22d on which rain did not fall.

Temperature.—The highest temperature of the year occurred on the 20th June, when the thermometer (in shade 4 feet above grass) registered 83·4 deg. It is worthy of being observed how

often the absolute maximum of the year occurs about the time of the summer solstice. Thus, in 1887, it was on the 25th June, in 1888 on the 26th of the same month, and in 1889 on the 22nd, the readings ranging from 82·4 to 87 deg. The year 1890 was an exception. Curiously enough, the highest reading in that year was on the 23rd May, and fell considerably below the maximum of previous years, having been only a fraction above 75 deg. But, again, in 1891 it is almost coincident with the summer solstice, and exceeds 80 deg. It does not follow from this, however, that June is the warmest month of the year. This distinction usually falls to July in consequence of the accumulation of heat in the earth during the longest days of the summer, just as the coldest month of the year is not generally December, in which the winter solstice occurs and the day is at the shortest, but the one succeeding it, that is January, a fact which is to be explained by the cumulative effect of the short days and greater obliquity of the sun's rays in midwinter. This has been verified in the past year, for, while the highest mean temperature of any month was that of July, viz., 59 deg., as compared with 58 deg. in June, the lowest was in January, viz., 36 deg., as compared with 39·2 deg. in December. It is right to add, however, that there are exceptions to this rule. Through the variations of the weather and the seasons in our uncertain climate, the highest monthly mean sometimes occurs in June or August, or even September (as was the case in 1890), and the lowest in December or February. But as a rule the maximum heat of the year is reached about the 14th to the 16th July, and the minimum in the period from the 4th to the 14th January. And so uniform is this rule, that if a sufficient number of years is taken for the average, say fifty years, for example, the temperature will be found to rise and fall with all the regularity of a curve. The lowest single thermometer reading of the year was recorded on the 9th of March, when it fell to 11·4 deg. The whole of the second and third weeks of March were extremely cold, with a prevalence of northerly and easterly winds, and occasional snow showers. It was during that period that the severe snow storms occurred in the south of England, with serious drifts, which resulted, as most of us may remember, in great interruption to traffic and some loss of life. The mean annual range of temperature was considerably above the normal, being no less than 72 deg. The mean maximum of the year was 54·6 deg.,

and the mean minimum 40 deg., showing a mean daily range of 14·6 deg. The mean temperature of the year was 47·3 deg., which is half a degree lower than that of 1890, but a fraction higher than that of the previous four years, with the exception of 1889, when it was slightly in excess of 48 deg. The most settled weather was in February, during the whole of which the conditions were anti-cyclonic, with a temperature fully 2 deg. above average, and a rainfall almost nil. The spring months were both cold and dry, the mean temperature of March, for example, being $2\frac{1}{2}$ deg. below average; that of April 3 deg.; and that of May also 3 deg. below average. In June and July the temperature was more suitable to the summer months, with a fair proportion of warm days, but the dryness continued till the close of the latter month. In June there were ten days, and in July eight, with a maximum temperature of 70 deg. and above. There were also five in September, but only one in August, the readings ranging from 70 deg. to 83·4 deg. The last five months of the year were characterised in an unusual degree by cloudy skies and frequent rainfall; but the temperature of these months was not far from the average. In the end of October, and again in the end of November, there was a spell of pretty sharp frost; four nights in October, with an aggregate of 9 deg. of frost; and five in November, with an aggregate of 25·6 deg. December had ten nights on which the protected thermometer fell to 32 deg. and under—aggregate, 37 deg.; January, eighteen nights—aggregate, 85·3 deg.; February, nine nights—aggregate, 38·1; March, fourteen nights—aggregate, 84·3; April, six nights—17 deg.; May, three—6·5 deg. There was thus a total of 69 nights of frost during the year, with an aggregate of 302 deg. This compares favourably with some previous years at this station—with 1887, for example, when there were 96 nights of frost with an aggregate of 360 deg. But it shows a more severe winter than that of 1889, which had only 55 nights with an aggregate of 193 deg.

Rainfall.—There were 200 days on which rain or snow fell (rain, 179; snow or hail, 21). On 27 of these days, however, the fall did not exceed one-hundredth of an inch. The heaviest fall in twenty-four hours was on the 18th October, when a depth of 1·06 inches was registered. There was only one other day on which the fall exceeded an inch, viz., on the 31st August, the amount being

1·01 inches. The total rainfall for the year was 42·92 inches. This is considerably in excess of that of the previous year, which was only 35·72 inches. In 1889 it was 35·17 inches; in 1888, 35·91 inches; in 1887, 30·99 inches; and in 1886, 41·13 inches; so that last year's rainfall is the heaviest recorded at Dumfries since observations began to be taken, although the number of days on which it fell was less than in 1886, which had 224 days, and in 1889, which had 208 days. This rainfall was very unequally distributed over the year. As previously observed, the first seven months—January to July—were unusually dry, the rainfall of each of them being considerably under average, and the amount for the period only 14·12 inches, as compared with an average of about 22 inches. The consequence was that before the end of July there was a scarcity of water in many places. The deficiency, however, was more than made up in the succeeding five months, which yielded a total of upwards of 28 inches. The month in which the heaviest rainfall occurred was October, with a record of 8·37 inches, equivalent to 837 tons of water per acre, spread over 21 days; but August was very little short of it, with 25 rainy days and 7·17 inches. The rainfall of September was not so much beyond the normal in quantity, but being spread over 21 days, it interfered to a very serious extent with harvest work, and along with the continuance of extremely wet weather during the greater part of October, prevented the corn crops from being cut, and, after they were cut, from being gathered in until after much damage had been done. It need hardly be said that during the latter months of the year, particularly in August and October, the river Nith was often in heavy flood. Repeatedly in these months the depth at the guage on the New Bridge was from 7 to 9 feet, and I noted at the time that on the afternoon of the 5th October it reached 11 feet. But, while the rainfall was very unequally distributed over the year, it seems to have been hardly less unequally distributed over the country. The reports shew that in the east of Scotland the rainfall did not exceed the average, and in some places fell short of it. At Ardrossan, on the west coast, it is said to have been 18 per cent. under average. But in the south-western districts, as the reports which have been published shew, the values are all in considerable excess of the normal. Thus Cargen reports over 47 inches; Drumpark, over 54; Dalbattie, almost 52; Canonbie, 49; Moniaive, 61.

Hygrometer.—The mean of the dry bulb thermometer for the year was 46·3 deg. ; mean wet, 43·9 deg. ; temperature of dew-point, 41·3 deg. ; relative humidity (saturation = 100), 83. The thermometer readings are a fraction lower than in 1889 and 1890, but higher than in 1888. The difference, 2·1 deg., is the same as in 1889, but greater than in 1890 by 0·2 deg. Relative humidity in 1889, 82 ; in 1890, 84 ; in 1891, 83.

There were no very severe thunderstorms in this district in 1891 ; but thunder was heard, for the most part accompanied by lightning, on the following days—May 15th and 27th, June 2d and 26th, August 3d, October 7th, and December 27th. This is probably not an exhaustive list, but it contains all the instances that came under my personal cognisance.

Halos.—A solar halo was observed on the 9th June, and lunar halos on five occasions—one on each of the months of January, February, March, November, and December.

Wind.—The prevailing directions of the wind during the year were as follows :—From an easterly direction, including E., N.E., and S.E., it blew 100½ days ; from a westerly direction, including W., N.W., and S.W., it blew 185½ days ; from due N., 22 days ; from due S., 39½ days ; and calm or variable, 17½ days.

An interesting discussion took place on the paper, and a hearty vote of thanks was awarded to Mr Andson, on the motion of Mr J. S. Thomson.

II.—“*Location of Dumfriesshire Surnames.*”

By Mr JAMES SHAW, Tynron.

Happening to have the Valuation Roll for the County of Dumfries for the year 1879-80, it occurred to me that some information of an interesting sort might be extracted from it with regard to the location of surnames. We have historical information of the arrival into the County of men who acquired lands in it and founded families. Some of those family names have increased and multiplied, dividing the County among them. Others of those early possessors of the County have either dwindled away, or by leaving only female heirs have not at all succeeded in leaving their surnames as memorials of themselves. Indeed, there is an analogy between the history of surnames and that of the fauna and flora which the palæontologist makes his study.

In the late Mr M'Dowall's "History of Dumfriesshire," chap. ii., there is an interesting summary of what was known of Dumfriesshire families at an early historical period. I shall present some of this information in a condensed form, and then show how it stands with those surnames at the present day in the Valuation Roll. The present paper shall be for the greater part limited to the proprietors of the County. In the first place, proprietors are less nomadic than occupiers. They have more ties binding them to the glebe. In the second place, their names are arranged alphabetically in the roll, and consequently are much more easily picked out by a reader whose time is curtailed by other duties. No doubt even in picking out there may be errors and imperfections, from want of that local knowledge which gives precision, but, on the whole, it is deemed that the conclusions approximate nearly to reality.

The surname which occurs most frequently as proprietor in Dumfriesshire is that of Johnstone. The first trace we find of this great family is in the reign of Alexander III. Thomas, Walter, Gibert, and John, sons of Hugo de Johnstone, of East Lothian, swore fealty to Edward I., in 1296, the last-mentioned baron being termed "Chevalier of the County of Dumfries." They seem to have been at that time and at an earlier date located in Annandale; but whether they gave to the parish of Johnstone its name, or received their designation from it, is not made out. The name is suggestive of Saxon origin. In Dumfriesshire there are upwards of seventy proprietors of this name at the present day. Johnstones possess nearly the whole of Kirkpatrick-Juxta. A single family of that name holds nearly the whole of the parish of Johnstone. There are two proprietors of that name in Applegarth, seven in Dryfesdale, eight in Lochmaben, three in Hoddam, four in Tundergarth, seven in Middlebie, two in Half-Morton, five in Kirkpatrick-Fleming, seven in Gretna, two in Dornock, two in Cummertrees, ten in the parish of Annan—making upwards of sixty proprietors in Annandale alone. In Eskdale there are six or seven, while in Nithsdale they thin out, turning up, however, to some extent, in the parishes of Dumfries and Holywood. Even in those Annandale parishes, which are nearly entirely held by a single family, or two, at most, if we glance over the names of the occupiers, a very fair sprinkling of Johnstones are among them. Take the parish of Johnstone, mostly held by Mr

J. J. Hope-Johnstone. We find six out of 120. Take the parish of Kirkpatrick-Juxta. We find six occupiers out of 100. Compare this with the occupiers of the parish of Morton, in Upper Nithsdale, where, out of 378 occupiers, only one Johnstone is enumerated, and it will become evident that in this County, at least, names stick to localities with the same strict range and limits as do the flora and fauna of a district. The division made by mountains and rivers obtains here as in lowlier spheres of life.

Next to the Johnstones, as representing the surname of an old historical family, are the Jardines. There are nearly fifty proprietors of them. The Jardines held lands in the parish of Applegarth before the Celtic element in the population was overlaid by the Saxon. Winfredus de Jardine, the first of the name on record, flourished prior to 1153. There are three in Moffat, two in Applegarth, ten in Dryfesdale, eight in Lochmaben, four in Hoddam, two in Tundergarth, three in Middlebie, and two in Annan—making thirty-four in Annandale. They do not appear in Eskdale; but in Dumfries parish there are five, in Torthorwald two, and in five other parishes they muster one in each. It will be thus seen that they cling to Annandale.

By far the greatest proprietor in Dumfriesshire is the Duke of Buccleuch, whose family name is Scott. His extensive estates are in Nithsdale and Eskdale, in which districts he holds whole parishes. There appear to be between 30 and 40 proprietors in the County of the name of Scott. The first notice of land being possessed by this family in the County is as late as 1459, when Sir Walter Scott of Kirkup received a grant of part of the barony of Langholm from King James II. By marriage the Scotts succeeded to the Douglas estates in Nithsdale. The great home of proprietors of this name is the parish of Langholm, wherein no fewer than 25 of them appear in the Valuation Roll. They appear sparingly in Annandale; some eight. In Nithsdale more sparingly still. Putting aside the Duke of Buccleuch, I can only find other three in different parishes. In the parish of Morton, Upper Nithsdale, which belongs wholly to the Duke, I find only one entry of a Scott as occupier out of 378. Turning to Langholm, we have 20 Scott occupiers out of 968 entries, which shews by both tests that the Dumfriesshire home of the Scotts is Eskdale, Drumlanrig, in Nithsdale, was only like a shooting lodge, not a permanent home, to the family.

The Douglasses, who once possessed so many acres in the County, now bulk poorly numerically. We hear of Sir William of Douglas, or William the Hardy, possessing lands in Dumfriesshire about 1300. Sir William Douglas, of Liddesdale, had great possessions in Eskdale and Ewesdale 1335. Douglas, the hero of Otterburn, had an illegitimate son, whose descendants were created Viscounts of Drumlanrig 1628, Earls, and then Marquises of Queensberry 1633. Exclusive of the Marquis of Queensberry, I find Dryfesdale, four; Dumfries, one; Gretna, one; Holywood, one; Langholm, one; Lochmaben, one; Tinwald, one—ten. Even with occupiers there are few of this name. In Morton, which gave title of Earl to the family, I only find one; in Torthorwald, where the Marquis of Queensberry had much property, the name does not occur in the list of occupiers.

A more prolific family name, and one related to Nithsdale, is the Fergussons. This is a Celtic name, Early in the fourteenth century a charter of lands was granted to John Fergusson in the parish of Glencairn. A branch of the family Fergussons of the Isle resided for many centuries in Kirkmahoe. Dunscore holds three; Dumfries parish, three; Annan, two; Glencairn, one; Closeburn, one; Holywood, one; Penpont, two—13 in all, of which 11 are found in Nithsdale, the original Dumfriesshire home.

Ruther is said to have been a genuine patriarch of the old Gaelic stock, who, dying in the reign of David I., left his name to the parish lands he possessed, Caer-Ruther, corrupted to Carruthers, now annexed to that of Middlebie, and signifying the town or Castle of Ruthar. This family name keeps well in Annandale. Dryfesdale has nine proprietary names: Lochmaben, three; Saint Mungo, three; Middlebie, three; Dalton, two; Gretna, three; Annan, two. The name occurs once as proprietors in two or three other parishes.

Murray. This is the family name of the Earl of Mansfield, who has large estates in Caerlaverock, &c. The ancient seat of the family was Comlongan Castle. The Murrays make a poor appearance in Nithsdale—Dumfries, two; Ruthwell, one. In Annandale they are numerous—Moffat, eight; Dryfesdale, three; Cummertrees, two; Langholm, six; Mouswald, one; Dalton, one.

The Carlyles trace their descent from Crinan, Abthare of Dunkeld. They held lands, like the Kirkpatrickes, under Robert Brus, first Lord of Annandale, about 1185. William Carlyle

received for wife Margaret, daughter of Robert Bruce, Earl of Carrick. His son obtained a charter for the lands of Colyn and Roucan, near Dumfries, in which he is designated "William Carlo, the King's sister's son." There are 20 proprietary names. Middlebie, six; Annan, one; Dalton, one; Dornock, one; Dunscore, one; Gretna, four; Hoddam, six. With the single exception of Dunscore, these are all in Annandale.

If we suppose that this family either got or gave names from or to the parishes in Annandale, then we must consider Annandale the first home of the clan. Ivon Kirkpatrick married Euphemia, daughter of Bruce of Annandale. He received a grant of the lands of Closeburn 1232. I make out 15 proprietary names. There are only two in Closeburn. One of them is proprietor of Threapmuir, concerning which there is a curious history. Kirkpatrick held Capenoch in Keir, and in this parish Kirkpatrick is a very common surname. Dryfesdale, five; Dunscore, two; Holywood, one; Keir, one; Kirkmahoe, one; Penpont, one; Glencairn, two. This gives ten for Nithsdale, and five for Annandale.

The Edgars are descendants of Donegal of Strathnith. He had a son who bequeathed his name of Edgar as a surname to his descendants, and this is one of our earliest Scottish surnames. His daughter was Affrica Edgar, of Dunscore. Dunscore seems the cradle of the clan. There are three Edgars in Dumfries parish; two Torthorwald; three Caerlaverock; two Moffat; two Middlebie. There are five other parishes in which the name occurs once. The name has decided Nithsdale affinities.

The Maxwells are from the Solway border. Maccus was their ancestor, a Celtic-like name. Their home was Maccusville, since ground down to Maxwell. David I. granted them lands. They still linger in the vicinity of the Solway. Gretna, three; Dumfries, seven; Holywood, four; Langholm, two; Kirkpatrick-Fleming, two. Other parishes in which there is but one per parish send the number up to 26. They don't seem to like the hills.

The Hunters are of Norman origin. A female marrying the daughter of Wm. Douglas of Drumlanrig strengthened the relationship of the family. Their original home was Barjarg, Keir. The name in that parish was changed to Hunter-Arundell. Moffat, 3; Caerlaverock, 3; Holywood, 2; Dumfries, 2; Glencairn, 8; Penpont, 3; Torthorwald, 1; and Tynron, 1. The happy hunt-

ing-ground of this clan seems to have been Nithsdale, with the exception of the three who have wandered away from their original Dumfriesshire dale to Moffat.

The Griersons settled at an early date at Lagg, Dunscore. Grierson is equivalent to son of Gregor, or M'Gregor. Dryfesdale, 1; Dumfries, 2; Dunscore, 2; Kirkpatrick-Juxta, 1; Lochmaben, 3; Moffat, 1; Mouswald, 2; and Penpont, 1. The Griersons are thus about equally divided between Nithsdale, the cradle of the clan, and the adjoining Annandale.

The Grahams of Netherby are a junior branch of the Grahams of Esk, descended from the Earls of Strathearn and Menteith. Netherby is in Cumberland, but it lies almost on the borders of Canonbie, Dumfriesshire. The Grahams are an ancient Scottish family. Sir James Graham fell at the unfortunate battle of Falkirk, in which William Wallace was defeated. In Eskdale there are—Eskdalemuir, 1; Langholm, 5; Gretna, 3—making altogether 9. In Annandale—Annan, 2; Cummertrees, 2; Dalton, 1; Dornock, 1; Dryfesdale, 7; Hoddam, 5; Hutton and Corrie, 1; Lochmaben, 4; Middlebie, 2; Moffat, 3; Tundergarth, 1 or 2, for one of them has been counted to Lochmaben already. In all, 29 in Annandale. But mark how they thin out in Nithsdale. There are only 3, and these in the neighbouring parishes of Dumfries, Torthorwald, and Holywood.

So much for the persistence of surnames thickest in the localities where celebrated or powerful families of that name first appear to be established in the light of history. At the same time, there is a weeding and thinning-out process going on. The once great families of Kirkconnel, Crichton, Riddel, Charteris, Stewart, Mandeville (corrupted into Mundell), Bruce, and others of lesser fame have left but feeble traces of themselves in the proprietary list, and, indeed, as Dumfriesshire surnames at all, are far exceeded by others less historically connected with the County.

I have kept pretty closely to M'Dowall's list of old Dumfriesshire families, though he has a few omissions supplemented here. This paper would have swelled out much too long to have attempted to account for the prevalence of names in Dumfriesshire less historical. Next to the Johnstones for numbers on the proprietary list come the Bells, and these are strong in the middle and east. Third in the list are the Irvings, confined also to the middle and the east. The Smiths are ubiquitous, and muster

about 36, a goodly proportion being made up of one, or at most two, in a parish. The Littles are by no means a small flock. The Richardsons, in contrast to the Smiths, huddle together. Out of 32, as many as seventeen are found in Lochmaben alone. Out of 32 Littles, six are in Moffat and ten in Langholm. The Bells also crowd together, eight or nine of them being got in one parish. We referred already to the swarming in Langholm in the case of the Scotts. Swarming is a much less common phenomenon in Nithsdale than in the rest of the County. In Nithsdale, Brown, Dalziel, Kerr, Milligan, M'Naught, Kelloch, and Kennedy prevail more than elsewhere. Smith and Dickson come much to the front in Dumfries parish and burgh. Wright is a surname that swarms. Out of 29 proprietors, 9 are located in Dryfesdale alone. Thomson and Wilson keep well to the front, but the former is the more clannish. Seven are found in the Lockerbie district out of a total of 23.

To a student of anthropology it would be an interesting field to collect information concerning those Dumfriesshire families. We should like to know, for instance, the average height and weight of the Johnstones, Bells, Irvings, Jardines, Grahams, Scotts, Smiths, Littles, Wilsons, Murrays, Wrights, Maxwells, and Carruthers, which are thirteen surnames at the head of the numerical list. We should like to know their muscularity, their mental bent, the colour of their hair and eyes, and other peculiarities which easily suggest themselves. Then, if we could get a composite photo of each clan, say, taking at random twenty-five of its members after the manner of the composite photos arranged by Francis Galton in his curious book, entitled "Inquiries into Human Faculty," we might learn something as to why these thirteen families had been more successful than others in obtaining property and position in the County. Suppose, now, that 1000 Blacks, as many Browns, and as many Whites were taken by random from our population, it would be curious to observe whether the two former were, on the average, more swarthy and more sallow than the latter. Names were often given at first from personal qualities which we may expect to be hereditary. It has been remarked that the Empress Eugène of France had got a well-formed slightly aquiline nose, a dowry from the Kirkpatricks, of whose blood she had some precious drops within her veins. Would 1000 Armstrongs or Shanklands (meaning long

legs) have arms and legs rather better developed than the Littles, Shorts, and Heavysides? It occurred to me that those well-meaning but clannish individuals who found schools, hospitals, and institutions mainly for the benefit of persons of their own and their wives' surnames might help us here; but on further inquiry I was given to understand that the trustees of such institutions did not adhere literally to the express wishes of the founders. With well-defined names like Jardine, Carruthers, Carlyle, Graham, &c., one would expect a purer lineage; but what are we to say of the Richardsons? How separate them from the Richards, Dicks, Dickies, Dicksons that we meet with mingled among them? Then there is the question, why do they swarm together? Thomas Carlyle went in for permanence rather than change, and has given us the terse saying, "Here or nowhere is America." But his favourite Goethe says, "That 'twas to give room for wandering in it that the world was made so wide." One thing the study of Dumfriesshire surnames points to is that there is no well-defined Scottish nation. The same sort of blood flows in our Lowland veins as does in that of our Southern neighbours. "The Scots wham Bruce has often led" were led by an Englishman of Norman lineage. The very word Wallace means the "foreigner," the "stranger." Under Malcolm Canmore and David I., who was Earl of Cumberland, the Saxons came from the south by thousands and the Normans by hundreds. King Robert Bruce owned estates in England. The boyhood of David I. was spent at the English court, and there accompanied him to Scotland the Riddel, whose sons acquired lands in Glencairn. The Mandevilles or Mundells crossed from Normandy. The Hunters trace their origin to Normandy. Baliol and Comyn are of Norman lineage. Richardson is a Saxon word. In the xx. chap. of M'Dowall's History of Dumfries a short allusion is made to other surnames and families beside those I have discussed that have played a part in the affairs of the burgh for at least the last three hundred years. Some historical notices and guesses as to their origin are given. These names are of mixed race, but the Saxon element preponderates. The great natural features that separated dale from dale and strath from strath, the great rivers formidable to river clans, the weary mosses that kept families apart, have now lost their importance. Roads, rails, bridges, telephones, postal systems, newspapers, and electricity have made light of nature's

barriers, and the population in these islands, under the present enlightened system of national education, are fast losing their dialectical peculiarities and their various proverbs and folk-lore notions, so far as these have a local colouring. It will by-and-bye be more difficult to distinguish an Annandale or an Eskdale man by his tongue. Differences between groups of men will always exist, but in the future it is likely to take more form than ever from professions and handicrafts, from the conditions of rural as contrasted with the conditions of urban life. The most potent factors for worldly success during these recent decades have been mental rather than physical, belonging to the brain rather than to the body.

4th March, 1892.

Mr THOMAS M'KIE, V.-P., in the chair.

Donations and Exhibits.—A valuable collection of East Anglian plants for our Herbarium from Mr Arthur Bennett, F.L.S. of Croydon; three photographs of Moffat trees by Mr Robert Brown, of Burntisland; a photograph of the sundial at Munches by Mr W. Maxwell; the 10th Annual Report of the United States Survey, 1888-9 (two parts); the Transactions of the Botanical Society of Edinburgh, November and December, 1891. A whetstone found in Crawick Water, Sanquhar, and 10 coins of Edward II. found at the farm of Ingleston, were exhibited by Mr J. R. Wilson.

COMMUNICATIONS.

I.—*Some Old Sundials of the District.* By Mr JAMES S. THOMSON.
(Abridged.)

A very beautiful and complicated dial stands at Kenmure Castle. It was made on slate by a local schoolmaster whose name is now forgotten. It is in a state of decay, the lettering being nearly unreadable. It seems likely that dials were constructed under the superintendence of the schoolmaster or his pupils in many cases. Metal dials were done by the engraver, and in the general working of dials the monumental mason, under the superintendence of a builder or architect, would be the chief constructor. One of the finest cut dials that I

have seen was done by a weaver of the name of Copeland, who lived in Newabbey. This displays not only nice cutting, but an amount of calculation that is not expected even at the present time in his rank of life, provided the calculations were made by himself, which I am assured was the case. He is described in the language of one of the residents who knew him as "an awful heady body," about as high praise for intellect as is given. It stands now in front of Shambellie House. The Gillieses, both the present engraver and his father, have had a good deal to do with the various flat or table dials in the neighbourhood of Dumfries, and some beautiful specimens of their skill in this department are to be seen in various villas. The table dials in this neighbourhood are all of a comparatively modern type, and have no special characteristics, if I except one that stands upon the low parapet of the Mipsteeple, next to Messrs Newbigging's premises. On looking from the top of Bank Street the pointer can be seen at the left-hand corner. It is made of bell metal or bronze. There is, unfortunately, no date or maker's name visible, but from the style of lettering and the weather-beaten appearance of the dial I should say it is upwards of one hundred years of age. Mr Gillies remembers it always as an old dial. It measures 17 inches square, and there is nothing of an unusual character in its appearance. It may have stood at one time in a different position. There is also a flat dial at Amisfield House, bearing the motto—"Day gives place to night; life soon ends in death; and time will be swallowed up in vast eternity." It tells the hours at various towns throughout the world. There is also a large dial at Drumlanrig Castle, described to me as a table dial. The vertical dials are few in number, and one alone is of outstanding importance, that of Munches House. It stood at one time in the garden of the old house, and dates back to the beginning of last century, 1730. When the old house was burned down a new site was chosen to build the mansion, and the dial, instead of being in the garden, now stands on the lawn. It lay neglected until lately, when Mr Maxwell determined to try and restore it as near as possible to its original appearance; but instead of having it restored according to the usual practice—that is, three-quarter made—the old pieces were carefully gathered, and, as far as possible, put together. This dial stands nearly seven feet high, and has dials inserted in nearly every part, from the square section

upwards—in all, some thirty dials of one kind or another. The four principal ones face the four points of the compass, one being for moonlight, and the others for morning, midday, and noon. The principal dials face the south; one large one is cup shaped, and has the hours traced and lines radiating from the gnomon; at the left hand is a St. Andrew's cross, with its arms forming the gnomons, and at the bottom is a small heart-shaped dial, the ridge in the centre throwing the shadow. Many fanciful dials used to be so designed, as of one, a tracing of which I have seen, cup-shaped and a human face at the bottom, a large nose forming the pointer. On the top of the dial rests a stone with the points of the compass with socket evidently for a wind vane, and the effect of the old monument amidst its modern surroundings is most suggestive. Another fine dial stands at the Moat of Troqueer, and is in the form of a globe. It has a double circle of hours, but with no date or motto, and it is made of Arbroath freestone. I should judge from its appearance that it was made in the beginning of the century. A pretty little dial stood in a garden at Auld-girth, with five dials, but its age is comparatively modern. There are two others of very chaste design, and evidently formed upon the same lines. One stands in the garden of Mr Davidson of Summerville, the other in that of Mr T. Roddan, plumber, Dumfries. Mr Davidson's stands nearly eight feet high. It has four dials, facing the points of the compass, and with a beautifully-cut globe on the top. From the information I first had, I thought this likely to be one of the old town dials, but on inspecting it and comparing it with the other, I came to the conclusion that it was quite modern. There is neither date, maker's name, nor motto upon it. That of Mr Roddan stands on a fine fluted column, and is about eight feet high, with four dials and a globe on top, and has the date 1849, and some initials, evidently those of a former proprietor. Sundials form objects of exceptional interest, and even of beauty, when suitably placed. The old cross and dial of the town of Leven was found built into a wall, and more than likely this is the last stage of many others. Where have all the pre-Reformation dials in Scotland gone to? Those in the form of images would have a short shrift in the time of the Reformation, as they were sure to stand where they could be easily reached; but I am under the impression that the remains of many others will be found on taking down walls in the vicinity of religious

houses, and they may be worth looking for. There can be little doubt that the old religious fathers who reared their abbeys with such exquisite taste would also extend that taste to their dials. I may say, in conclusion, that two typical old houses where what is old is preserved have proved a disappointment. I refer to Kirkconnell and to Maxwelton. Both have the ordinary flat dials made in the beginning of the century, but there is no evidence of old dials on the buildings. Mr Witham assures me to this effect as regards Kirkconnell; and in the case of Maxwelton, by the kindness of Mr Cecil Laurie, I had the pleasure of closely inspecting the old walls, but could find no evidence of such; but it may be they have been covered over at some time in pointing or cementing the walls. There is also a dial on the gable of a very old house at Jericho, cut in stone, and old inhabitants tell that, from its accuracy, it was used as a regulator over the County. I confess to a feeling of regret at the smallness of the discoveries, but have hopes that, attention having been called to the subject, some of great interest may yet be discovered.

II.—*Scotland in the Past.* By MR PETER GRAY, of Edinburgh.

This paper was supplementary to two former ones illustrating the moral and material condition of the Scottish people from an early period down to about the beginning of the last century, as traceable in the records of foreign visitors. The evils which fell upon the country from the death of Alexander the Third were, the author considered, mainly occasioned by the open or covert attempts of the English kings to subvert the independence and check the progress of the northern kingdom. Previous to the disputed succession to the throne of Scotland that country, under a series of wise monarchs, had become prosperous, while the Scots were on the most friendly terms with their kinsmen and neighbours of the North of England. After a passing notice of a contemporary account of the suppression of Baliol's futile revolt against his patron, Edward the First, the description by Froissart of the Scottish people in the reign of David the Second (1329—1371) was referred to at some length, as illustrative of the high spirit of the people, and their full confidence in their power to repel single-handed the aggressions of "their auld enemy of England." The next writer noticed, John Hardyng, is the author of a rhyming itinerary of Scotland, dedicated to Edward the

Fourth, in which the following stanza occurs, descriptive of the south-western district:—

“ From the town of Ayr in Kyle to Galloway,
Through Carrick pass unto Nithsdale,
Where Dumfryse is a pretty town alway,
And plentiful also of all good vitale,
For all your army without any fail,
So that, keeping this journey by my instruction,
That realm ye shall bring in subjection.”

The account of Eneas Sylvius Piccolomini, a shady personage who afterwards occupied the chair of St. Peter as Pope Pius the Second, and who visited Scotland in the reign of the first James, was then quoted to show the condition of the Scots at that time. Piccolomini describes the common people as bold and forward in temper, but poor, and destitute of all refinement. This attribution of poverty seems only to apply to their habitations and furniture, &c., for he adds that they eat fish and flesh to repletion, although bread only as a dainty. He, however, appears to have found the inhabitants of the southern side of the Border in a much more depressed condition as regards provision for daily wants, besides living in constant and extreme terror of their northern neighbours. A hundred years later Don Pedro de Ayala, a Spanish envoy, describes the Scottish people as courageous, strong, quick, and agile, handsome, and very hospitable; the woman he thought the handsomest in the world. The King, James the Fourth, who shortly afterwards perished at Flodden, told Ayala that in thirty hours he could assemble 120,000 horse. The Don describes the towns and villages as populous, and the houses provided with excellent doors and glazed windows. The narrative of Peder Swave, a Dane, who visited Scotland in 1535, was referred to chiefly on account of a curious legend connected with the Yorkshire family of Constable. Stephen Penlin, the Frenchman whose English experiences was detailed in a former paper, bears testimony to the abundance and cheapness of provisions of all sorts in Scotland during the regency of Mary of Lorraine. “It is to be noted,” he adds, “that there is nothing scarce in this country but money.” About the same time another Frenchman, Henry, Duc de Rohan, speaks of Scotland as a country truly generous in the production of virtuous persons. Besides the nobility, whom he found full of civility and courtesy, the country, he says, possessed a multitude of learned men and people, remarkable for courage

and fidelity. The author of the paper next referred to the narrative of Thomas Tucker, a Commissioner under Cromwell, from whose report we learn that Ayr had then taken the place previously held by Dumfries as head port of the whole south-western coast, the latter being described as "a pretty mercat town, but of little trade," what there was being mostly by land from Leith and Newcastle. Quotations followed from the books of Franck and Brome, bringing down the accounts to nearly A.D. 1700. The author concluded with a review of the condition of the people during the long period under consideration, remarking that, in his opinion, the state not only of the destitute poor but of the unskilled labourer also had not improved in the same ratio as that of the well-to-do classes of a country which is now, in proportion to its population, the richest in accumulated wealth in the whole world.

III.—*Further Correspondence from the Grierson Collection.*

By Mr JAMES R. WILSON, Sanquhar.

I have again made a careful search among the remaining correspondence of the late Mr William Grierson, of Dumfries (the Doctor's father), and have succeeded in discovering certain letters and documents which I now desire to place before you. The subjects are of a very miscellaneous nature, but may still be of interest to members of this society and to the general public. The first I will mention is a letter from the late Dr Wightman, of Kirkmahoe, whom John Mayne describes as "the gentlest creature here below," sending Mr Grierson a hymn to be sung by the children of St. Michael's Church on the occasion of the jubilee of George the Third. The letter reads thus:—

"Dear Sir,—I will send this in to-morrow that the children may be masters of it before their public exhibition. Much depends on *that*. I might have kept it longer on the anvil, but have sent you the effect of the very first *heat*. I hope it will answer. I could not wind it up sooner. I hope it will not be too long. Compliments to the good Doctor.—I am always, dear sir, yours very sincerely,

"JOHN WIGHTMAN.

"Kirkmahoe Manse,
"Sunday, 10 o'clock P.M."

The following is the gentle Doctor's hymn of jubilee, which was sung in St. Michael's Church on October 25th, 1809 :—

Jehovah, King of Kings supreme,
To Thee we praises sing ;
Our hearts adopt a pleasing theme,
George, our beloved King.

We hail this glad auspicious day
And our small tribute bring,
Exulting in our Monarch's sway,
George, our beloved King.

This day of joy, to us is dear
(Aye sacred arches ring) ;
It sees him reign this fiftieth year,
George, our beloved King.

Jehovah, King of Kings, we pray,
While we this anthem sing,
That oft he see this joyful day,
George, our beloved King.

When, at Thy time, remote or near,
To death Thou shalt him bring,
May he the crown of glory wear,
George, our beloved King.

This hymn had been sent by Mr Grierson to Mr Mayne to be inserted in the London *Star*, of which the latter was editor, and in a letter of date 6th December, 1809, he alludes to it and to the approaching marriage of Mr Grierson as follows :

“Mr Wightman's hymn received all due honour from the *Star*. I hope he was not displeased with the liberty I took in altering one of the lines. To me in its original state, besides being prosaic, it looked like a bit of a bull. (I have copied it from the original.) But by far the best part of that letter, either in prose or verse, was the interest, the new interest, which you give me in your welfare by making me acquainted with your intention of entering into the holy state of matrimony. Happen when it will, I ardently wish that health and fortune and every sublunary blessing may smile on you and your best beloved. She is of an excellent stock and you are a congenial scion.”

Again, on 12th August, 1816, Mr Mayne writes :

“Joy to great Cæsar ! Mr Hunt has this day called to give me your note in his letter, by which I am very glad, my dear sir,

to observe that you are now the happy father of a fine boy, and that Mrs Grierson and he are as well as can be expected, as the saying is. Offer my kind congratulations to both and to Grand-mamma, and accept the same yourself from my inmost heart," &c.

The fine boy here referred to died in infancy, and the late Dr Grierson, who was born on 19th February, 1818, was the next offspring of the marriage. I have found among the papers a poetical piece on the death of an infant boy, initialed "A. C.," which I think refers to the death of this child. From the handwriting I think it is by Allan Cunningham, and it certainly does not detract from his known powers as a poet.

A VISION OF MIRZA :

Written on the Death of an Infant Boy.

On a desert shore methought I stood,
As the closing day withdrew,
And wide o'er the ocean's solitude
The shades of twilight grew.

The troubled sea was rolling dark,
And the tempest gathering fast,
When I spied a slender little bark
On the stormy billows cast.

One lonely wight was all its freight,
And he seemed to weep and mourn,
For he looked like one on a journey gone
Where the travellers ne'er return.

I sighed to think of that hapless wight
On a sea of perils thrown,
For the sky was dark with the cloud of night
And he rode the waves alone.

But still he rowed amid the blast,
And slowly he bore away
Through the wizard glum that, all o'er cast,
On the water's bosom lay

Oh, how shalt thou the boisterous shock
Of wind and tide repel,
Or guide thy course through reef and rock,
Or signs of danger tell.

Thy bark is light to tempt the storm
With a mariner so young,
While blackening clouds of phantom-form
Are round the welkin hung.

Before thee far expands the deep,
Nor shore nor haven nigh,
And thou hast no watch-tower on the steep,
No star in the moonless sky.

Behind thee fast recedes the land,
Between high rolls the wave,
And all unskilled is thy little hand
So wild a sea to brave.

Unknown, untravelled is the bourne
Of the land thy oar must win ;
Another night is long ere dawn of morn
On thy dreary path begin.

Some angel hand on the distant strand,
Or golden mountains high,
A beacon raise, to point the land
When thy hour of peril's nigh.

The bark, now far in the waves embraced,
Was faintly sinking away,
When the scowl of heaven grew bright apace
With the purpling break of day.

And the hills of a green and fairy land
Appeared on the verge of the deep,
And strains were heard of some holy band
Like music in midnight sleep.

And spirits bright as orbs of light,
In shining throngs were seen,
With crowns of gold, in their robes of white,
And palms of evergreen.

They beckoned him on with angel smiles,
Away to their bowers of bless ;
And they hailed him home to their sunny isles,
With the songs of paradise.

They led him by pure and living streams,
And wiped his weeping eyes ;
And they bound his hair with radiant beams
Of the rainbow's yellow dyes.

In glittering ranks they moved, all bright
And glorious to behold ;
Each one in his panoply of light,
With a lyre of burning gold.

And sweet were the melting strains that broke
O'er the ocean's azure swell ;

But the airs they sang and the words they spoke
A Seraph's lips must tell.

For quick as thought fled sea and sky,
And the music charmed no more ;
I wished for the wings of a dove that I
Might find that happy shore.

A. C.

There is also a small poem by John Mayne, copied from the *Star* of March, 1808, which is not without interest as shewing what editors of London papers wrote in those days.

THE CURIEUX.

(A tribute to valour, by John Mayne.)

What mean the colours half-mast high
In yonder ship upon the main ?
Ah, me ! a seaman made reply,
Some hero of renown is slain.

Yon brig is called the Curieux,
To Britain's foes a deadly name ;
Her Captain, Sherriff, and his crew
No strangers in the lists of fame.

But, in a daring enterprise,
Tho' glory has the conflict crown'd,
A wreck his gallant vessel lies,
While carnage reddens all around.

Behold, approaching to the shore
The tars lamenting, bow their head ;
Poor Sherriff wounded to the core,
And for his King and Country dead.

Ye brave companions of his life,
Ye heroes of the Curieux,
Who join'd her in th' unequal strife,
Who saw him bid the world adieu.

To Honour's bed his corse convey,
For glory was his leading star ;
Mild as the gentlest breeze of May,
But like a lion in the war.

And keep your colours half-mast high,
A mournful signal o'er the main
Seen only when the illustrious die,
Or are in glorious battle slain.

There is a letter from Mr W. S. Walter, of London, a native of Nithsdale, and contributor of various poetical pieces to the "Nithsdale Minstrel." It relates to the Mausoleum and Turnerelli's sculpture.

"Dear Sir,—It gives me great pleasure to see that you have at length come to a determination respecting the monument to our favourite bard, and I now only feel anxious that something worthy of that bard may be produced to cover his remains, 'and point the spot where buried genius lies.' I have seen a spirited and highly elegant model from the hand of Mr Turnerelli, the celebrated sculptor, who has just completed an elegant monument to Dr Beattie. I think the subject most appropriate, and he has very judiciously selected the poet's own memorable words, than which nothing could be more striking. I hope the committee will not waste any great proportion of the subscriptions on the mere masonry; the great object certainly should be the statuary; the other is merely a secondary object, in my idea a mere protection from the weather, which will beat from the north and eastern quarters where the monument will stand, and which must consequently be well defended. Pray do your utmost to forward the measure in its best shape, and you will soothe the bard's indignant shade. With my best wishes to all friends at Dumfries,—I am, dear sir, your much obliged, &c.,

"W. S. WALTER.

"London, 10th April, 1815."

Mr Walter also wrote a poem for the Burns' Club meeting in 1817. In forwarding it he writes :

"Dear Sir,—I am fully sensible of the honour the committee have done me in supposing that I could do anything worthy of the occasion which calls for it; but the name of Burns is inspiring, and for what I have written, such as it is, I leave to its fate. Mr Turnerelli has been, till lately, detained in Ireland by business and family concerns. I saw him yesterday, and of this I am happy to acquaint the committee, that he is confident he shall be able to fulfil his engagement of having the monument ready by August next. He has heard every opinion of the model, taken the best advice, and is now modelling the whole anew the full size of life, as he is resolved to do all in his power to render the sculpture worthy of the bard it is to commemorate. I beg you will communicate this to the gentlemen of the committee, and at the same

time express my sense of the additional honour they have done me, in union with the many past. Circumstances oblige me to be absent from you personally, but I shall be present with you in spirit and participate in all the glee and feeling that will mark your jubilee. If this should be thought worthy of the press, will you oblige me with a few copies on fine paper for my friends, and drop me the *Courier* with the account of your meeting. Mr Talonia unites with me in remembrance to Mrs Grierson, Mr Syme, and all friends.—I am, dear sir, yours truly,

“W. S. WALTER.

“January 16th, 1817.”

The heading of it is, “Verses on occasion of the meeting at Dumfries of the friends and admirers of Burns to celebrate his birthday, the 25th January, 1817.”

He in days past who on the Poet's bier
 Shed the warm tribute of an artless tear,
 And as he gazed, would heave the frequent sigh
 To see that Poet's bones unhonoured lie :
 He who so lately hail'd the happy day
 Destin'd the long-protracted debt to pay,
 To hush the censures men would still obtrude,
 And place the corner-stone of gratitude :
 Now hastens with no common zeal to greet
 The long-wished hour that sees that work complete ;
 That sees the Poet's hallow'd relics placed
 In yonder cenotaph, the work of taste.

'Tis done, and though that unforgotten name
 Asks no memorial to ensure its fame,
 Secure through lapse of ages still to find
 A deathless record in transmitted mind.
 Though, when the column, faithless to its trust,
 Shall lie a nameless ruin in the dust,
 His fame, with inborn vigour shall respring
 Fresh from the wreck of each material thing :
 Yet do we pay whatever can be paid
 To mark our reverence to his mighty shade ;
 Honours like these befit the seer and sage,
 Those great contemporaries of every age.

How many round this festive board I view,
 Who knew the Bard, and all his merits knew.
 Yes, you have mark'd the soul, the raptures high
 That flash'd expressive from his eagle eye ;
 Have seen the light of mind, the meteor-ray

Of stirring genius round his temples play ;
 Have heard his accents, as he roll'd along
 The deep, the full, yet rapid tide of song.
 Not like the stream, which art with labour'd aid
 Teaches to murmur o'er the forced cascade ;
 Not like the rill, whose prison'd waters mourn,
 And idly lave the artificial urn ;
 But like his favourite Nith, whose ample tide
 Pours in its native wildness far and wide ;
 Now round the rocky shelve delights to play,
 And chide the pebbles that oppose his way,
 Now loves in soft and silent lapse to glide,
 And kiss each bending flowret on his side.

But, lo ! what vision from the clouds descends,
 And towards yon spot its radiant passage bends ?
 'Tis she—'tis Coila's genius ! by her grace,
 Her sentimental mien, the maid I trace ;
 Lightly she hovers o'er the finish'd pile,
 Joy in her eye and triumph in her smile,
 Sweet is her form as fleecy clouds of even
 Wide waves her mantle to the breeze of heaven ;
 And still green-springing, and for ever green,
 In her fair hand the Holly wreath is seen,
 The same she twin'd around the Poet's head,
 When " Wear thou this," in solemn tone she said.
 Behold, the heavenly form approaches near ;
 And, hark ! what accents break upon mine ear ?

" Joy to the day ! upon whose happy morn
 My favourite Burns, the child of song, was born ;
 Joy to the day ! that late repays his name
 The long arrear of monumental fame ;
 That summons round his tomb each sister art
 Her own peculiar honours to impart,
 Till—hushed each censure, each aspersion rude—
 Here he reposeth as a poet should.

" Ye friends of merit, in whose breast is placed
 Th' illumined spirit, and the mind of taste ;
 You, whom the force of native talent charms,
 Whom verse transports and tuneful fancy warms,
 Thanks to that noble, patriotic zeal
 That bade you for this son of genius feel ;
 Yes—ye have nobly paid the tribute due,
 A tribute worthy him, and worthy you !

" Child of my care, farewell ! thy varied page
 Shall charm the present, teach the future age,

That proudly daring spirit, which burst forth
 Wild as the breezes of thy native North,
 Expireth not in monumental gloom,
 Nor stagnates in the dampness of the tomb ;
 No ! it still lives and breathes around thy shrine
 A kindling charm, an energy divine.
 To this lov'd spot, how many a bard unborn—
 Destined like thee his country to adorn—
 Shall come with awe to venerate thy name,
 And catch some portion of thy sacred flame.
 E'en now thy bold and spirit-breathing rhyme
 Wings its free influence thro' each distant clime,
 Far as the fame of Scotland's hills is known,
 Far as the burning and the frozen zone.
 See yonder Scottish exile, as he roves
 All faint and weary thro' Columbia's groves ;
 Let him recal thy soft and soothing strain ;
 His spirit burns, he half forgets his pain,
 And thirsts and hungers for his native plain.
 So vast the magic of thy simple song,
 To wake associations warm and strong,
 Let but the mountain daisy meet his eyes,
 A thousand fond remembrances will rise !

“ Child of my care, farewell ! thy vivid lay
 Delights the charms of nature to portray :
 Sweet be thy slumbers midst these scenes below'd,
 Where thou so oft in pensive mood hast rovd.
 Thou winding Nith, that once wert proud to greet
 His tuneful ear with voice of waters sweet,
 Be grateful still : thou wert his favourite theme,
 His genius bade thee flow a classic stream :
 Still soothe his spirit with thy murmuring wave,
 And waft a passing requiem to his grave.
 Ye hills that round his much-lov'd valley rise,
 And mix your misty summits with the skies,
 You caught the echoes of his passing lyre,
 And mourned to see your native Bard expire.
 Spread your broad arms—an ample bulwark !—forth,
 Repel the ravage of the stormy north,
 That safe protected from the tempest's rage
 Yon sacred pile may live from age to age.

“ Yes—long as Criffel on his ample breast
 Reflects the golden glories of the west,
 Long as old Queensberry's gigantic form
 Shall brave the summer heat, the winter storm,
 Long as the Nith from mountain urn shall flow

And health and plenty on these vales bestow :
 So long, my son—nor can the muse deceive—
 So long thy name and memory shall live.”

W. S. W.

There are three letters from Sir Francis Burdett, Bart., to the Rev. Henry Duncan, Ruthwell, bearing upon a subscription towards the erection of the Mausoleum. He was the father of the present Baroness Burdett-Coutts, was the most popular English politician of his time, and the idol of the London populace. The letters are:—

“ Sir,—As a warm admirer of the first poet of his time I shall readily contribute my mite to do honour to his memory. I own I should rather have contributed to benefit his children, or any who were dear to him, as doing more good. For, after all, a monument is very superfluous to one who has left such works behind him.—I remain, sir, your most obt.,

“ F. BURDETT.

“ Oxford, 30th Jany., 1814.”

“ Sir,—I should not have delayed answering your letter had I not been under a difficulty which, after all, I must get your assistance to remove. It arises from my not knowing the sum it would be handsome for me to name for the erection of the monument to the genius of Burns. If you would have the goodness to inform me what has been subscribed by others, or what would be considered as handsome, you would confer on me a great obligation.—I remain, dear sir, your most obedient and very humble servant,

“ F. BURDETT.

“ Oxford, 8th March, 1814.”

“ Sir,—I am much obliged to you for the clue you afford me to escape from the difficulties I felt upon the interesting subject of Burns's memory. It appears to me that, in order to do honour to the poet, subscriptions should be numerous rather than large. I shall therefore name the largest sum hitherto named, £10, having not the least objection to double, treble, or quadruple it if thought better, and if that which strikes me as desirable should not equally strike the committee.—I have the honour, sir, your most,

“ F. BURDETT.

“ Oxford, 25th March, 1814.”

Mr W. H. Mayne, son of Mr John Mayne, writes an interesting letter to Mr Grierson while resident in Thornhill in regard to

the "Siller Gun" and its final destination. I produce it for its intrinsic merit :

" London, 13th September, 1852.

" My Dear Sir,—I am much obliged for your attention in sending me the *Dumfries Standard* of the 11th ultimo, containing an account of the presentation of the 'Siller Gun' by the Seven Incorporated Trades to the Magistrates and Town Council of Dumfries for the time being, together with a notice of what was intended to be done with the other relics belonging to the Trades. I am very glad that the 'Siller Gun' has been so appropriately deposited with the chief authorities, and that the gift of King James the Sixth will be carefully preserved among the memorable curiosities of the town. A more judicious arrangement could hardly have been made, since the hand of time and the progressive change of public opinion and legislation had left to the Trades only a nominal existence—a state of things which has induced them finally to break up their incorporation. There is one condition which I do not think the authorities will be called upon—at all events for many years—to comply with, namely, that on due requisition temporary possession of the 'Siller Gun' shall be given up to the tradesmen of Dumfries that it may be shot for and adjudged as a prize for the day to the best marksman. I think that this sort of feeling has gone by, and that the public mind is more likely to be occupied with cheap excursion trains to convey the multitude for a small outlay to some distant attraction.

" The *Standard* of the 24th March, which you were also good enough to send, had an interesting notice of the Seven Trades in connection with the 'Siller Gun,' and I have also to thank you for the paper which gave an account of your flower show at Thornhill. I suppose you are preparing for another like display during the course of this month, as then intimated. I hope you have received an occasional newspaper sent in acknowledgment. My sister unites with me in kind regards to Mrs Grierson, yourself, and the Doctor. We trust that you are all quite well—And I remain, my dear sir, yours faithfully,

" W. H. MAYNE.

" William Grierson, Esq., Thornhill, N.B."

In replying to a vote of thanks, Mr Wilson mentioned that he had found out that Mr Hunt, who designed the Mausoleum, was the architect of the building, which he thought was first called

the Episcopal Chapel, but is now the Wesleyan Chapel. He found a description of the chapel proposed to be erected in Dumfries mentioned in one of Mr Hunt's letters, and he could not find the description to correspond with any other place. Mr Hunt spoke of the great window in the chapel facing Castle Street.

1st April, 1892.

Mr JAMES BARBOUR, V.-P., in the chair.

New Member.—Mr John K. Rogerson of Gowanlea, Holywood.

Donations and Exhibits.—Vol. 27 of the Zoological Record containing Dr David Sharp's work on "Insecta," presented by the author, together with his paper (reprinted from the Entomological Journal) on Entomological Pins; the Report of the British Association for the Advancement of Science, 1891; the Transactions of the Minnesota Academy of Natural Sciences, 1887-89; two Whorls picked up on the farm of Knockneen, and also two ancient Flints found in the same place, presented through Mr Murray, by Mr John M'Meekan, Knockneen, Stranraer. Mr Frank Miller exhibited a bronze spear-head, the property of Mr Charles Baxter, High Street, Annan, found in a garden there.

COMMUNICATIONS.

I.—"*Some Curious Place Names.*" By Mr PATRICK DUDGEON, F.S.A.

A large proportion of our existing surnames, as most are aware, derive originally from local names, as for example Underwood, Oxley, Woodburn, &c., &c., the name having been given to some person from or living near some such place, and afterwards, when surnames came into common use, adopted by the individual as his surname, as we now recognise the term, so also with such names as Scott, Inglis (English), French, London, Glasgow, Manchester, and thousands of others deriving from similar sources; on the other hand, many names of places derive from names of persons, such as Williamfield, Robertland, Jock's Lodge, Johnsburn, Robinfield, Charlesfield, and so on, all evidently being named from persons who were somehow or other at one time identified

with the places. Besides these common enough names there are some very peculiar ones, such as Painted Effie, Fardenwilliam (*fard*, well-favoured), Jeannie's Lea, Grizzlerig, Kitty Brewster, Tambowie, Bessiewalla, Peterculter, &c. These individuals whose names are thus handed down to us in names of places were doubtless at one time locally well-known characters who, or what they were famed for, have in most cases long been forgotten, their names, as associated with place names, being the only record of their existence. So with some particular acts of individuals which doubtless made an impression on the inhabitants of the locality at the time, but are now only known from names of places in the Directory, such as Cross-ma-loof, Cleick-him-in (Sir Walter Scott has made use of this name in "St. Ronan's Well"), Look-about ye, Standalane, Standstill, Dinna muck, Blaw plain, Dar fash, &c. Some of these names are suggestive of the characters of the persons whomsoever they have been. We have also brought before us the personal appearance and peculiarities of people long since forgotten, such as Black tongue, Red head, Bad head, Bushell head, Cockspow, Skirling, Butchercoat, Contentibus (this name must have been given by an easy-going soul), and many other names of a similar kind are to be found. As might be expected, names of places derived from farming and crops are very common, as Greencornhill, Fallowheat, Quhytewoolen (wooin?—*i.e.*, plenty wheat), Fouracres, Monyacres, &c. Somewhat in connection with these names we have Scableuch (evidently a place where sheep did not thrive), Horse-up-cleuch (pointing to a place where some horse had strayed, or was lost), Sleepyhillock, Sliddery, Fivestanks (pools), Caird-seat (the resort of some travelling tinker), Back o' Hill,——o' Moss,——o' Loch, Backside, Whitelums, Goat-milk, Honey-barrel, Road-meetings, Axletree-well, and many other names of this kind. What at first must have been rather objectionable localities, one would imagine, but which, it is to be hoped, have improved since the names were first attached to them, are indicated by Dustyriggs, Hungreyhill, Mouldy Hills (*mouddie*—a mole), Gathercauld, Cauld-hame, Mudhill, Skirts-of-Toadland, Windydoors, Foulsyke, &c.; while Paradise, Peace and Plenty, and Snowlessfields seem to point to desirable stations. Necessity seems to have been a place where the first settler had but small choice as to where he was to pitch his tent. Whiskyhall and Claret can hardly be supposed to have been the

residence of teetotalers, and Drink-between must originally have been some small public-house situated between two towns or villages where Drymen were wont to rest, and "their hydra drouth did sloken," on their journey between the two places. We have also the old tenure on which lands were held recalled to us, as Freeland, Pennyland, Shillingland, Tenshillingland, Merkland, Two, Three, and Fourmerkland, and so forth. Animals of all kinds enter largely into our local nomenclature. Wolflea, Wolfhill, Wolfcrag, &c., Bearsden, Bearnock, &c., Beaverhall (not in the last Directory) remind us of the time when these animals were common in the country; Catsbit was a place frequented by the wild cat, Dogballo (noisy), Ducksdub, Gowksknowe, Goosecruvie, Houlet Ha', Rattanraw, Paddockhole, Midgehole, Todholes, Brockhole, and many others. The universal belief in olden times of the existence of fairies, bogles, and other supernatural beings is vividly brought before us in numerous names, such as Bogleshole, Boglestone, Carline-craig, Witchknowe, Fairy Knowe, Fairygreen, Brownie's Hill, &c. Such names as Maison-dieu, Grace-dieu, Bellevue, St. Germain, French-mill, &c., recall to our remembrance the close relationship which at one time existed between ourselves and the French nation. We have an instance of a village acquiring a rather odd name in our immediate neighbourhood. There formerly stood a small public-house on the road about half-way between Dumfries and Dalbeattie which was called "Beeswing;" a picture of a race-horse of this name, well-known on the turf about 50 or 60 years since, hung as a sign over the door. The public-house has for a good many years ceased to exist; additional houses, a church and manse, post office, and railway station have sprung up in the immediate vicinity of the old public-house, and the village as it now stands is found in the Directory as Beeswing.

As an instance, out of many which could be given, in which changes of names arise, Bailliewhirr is doubtless a corruption of the Celtic *baile-a-ùr* (the new or fair town or hamlet).

II.—*A General Catalogue of Dumfriesshire Antiquities.*

By Mr PHILIP SULLEY, F.R Hist.S.

Mr P. Sulley submitted a general catalogue of the antiquities of Dumfriesshire, compiled from the ordnance survey map and checked by reference to the Statistical Account. He went over the county parish by parish, indicating the various objects of

antiquarian interest reported to exist in it. In connection with Holywood, he gave the results of a personal examination of the hollows found on several of the stones of the Druidical Circle, which are stated by Sir James Simpson to be the only cup markings that exist in Dumfriesshire. On the enormous boulder at the south-west corner the cups are numerous, and all on the north and north-east side. Eight of these are on the sloping underneath surface, and are as fresh and distinct as if they had been cut two instead of two thousand or more years ago. They are four inches in diameter, three inches deep, and very finely shaped. On the surface of the north stone there are two; and on the north-east corner stone a considerable number on the surface, in chains, and some connected. On the small stone at the side (possibly a fragment of the larger stone) there is a distinct and certain chain of cups. Moffat and Kirkpatrick-Juxta were mentioned as specially rich in forts and moats, and in the latter parish 101 tumuli are recorded. Special notice was also bestowed on the range of camps, forts, and tumuli at Burnswark, in the parish of Hoddam, the writer observing that these were in themselves sufficient to render Dumfriesshire famous for its antiquities. The conclusion of the whole matter (he said in concluding) is rather startling, the figures are so large. Excluding such small matters as cairns, thorns, holy wells, "loups," defunct villages, &c., the catalogue gives, as having actually existed and still to be traced—Camps, 42; forts, 128; moats, 9; standing stones and Druidical Circles, 36; Roman roads, 5; tumuli, 306; churches, chapels, and other religious edifices, 57; castles, 37; towers, 44; battlefields, 7.

III.—*Some Notable Trees of the Upper Annandale District.*

By Mr JOHN T. JOHNSTONE, of Moffat.

Perhaps the two best known show trees of the district are an oak and a Scots fir, and these are remarkable, not so much for their size, which is considerable, as for their connection and association with the name of a well-known minister of divinity and naturalist of the last century, viz., the Rev. Dr Walker, F.R.S.E., minister of the Parish of Moffat from 1762 to 1783, and at the same time also Professor of Natural History in the University of Edinburgh.

The Scots fir is known locally as the "Pouch Tree," from the fact that the Rev. Dr is said to have carried it from Edinburgh to

Moffat in his pocket, on one of his many journeys necessary for the due fulfilment of his dual duties, and planted it in the Glebe, where it has grown and flourished for nearly 130 years.

The dimensions of the Pouch Tree are as follows :—Length of bole, 7 feet 6 inches ; girth at one foot above ground, 10 feet ; girth at five feet above ground, 8 feet 9 inches ; spread of branches east to west, 51 feet 6 inches ; spread of branches north to south, 69 feet ; height, 48 feet 6 inches. The Pouch Tree is standing in the Glebe, nearly opposite the Railway Station, and for a long while has been shewing extensive and visible signs of decay. The trunk seems to be tolerably sound, but a number of the branches are completely dead. Many years ago the late Rev. Dr. MacVicar, minister of the parish, had the main cleft of the tree covered with sheet lead to protect it from the weather, but this lead has disappeared from the tree for a long time, and has never been replaced. In a few years at furthest we will have to lament the loss of this ancient relic of the worthy Doctor. The late John Brown, another of Moffat's worthy sons, has, in a rhyme on the Pouch Tree in his work "Moffat Musings and Maunderings" (rhymes on local subjects), but now out of print, endeavoured to perpetuate the memory of the Rev. Dr. and the tradition concerning the tree, from which I take the following extract :—

I was the guid man's special care,
Nor ken'd a want o' soil or air ;
And, hame at last, his first affair,
 'Mang things maist pressing,
He planted me, if no wi' prayer,
 At least wi' blessing.

To what grand end, say ye wi' een,
Summer and winter since I've been
A swelling mass of living green,
 Spread out before ye—
The pride of Moffat's sylvan scene,
 The landscape's glory.

The oak is locally known as the Auld Gouk (Cuckoo) Tree, and stands by itself in the field on the right bank of the Annan (Kirkpatrick-Juxta Parish), and fully 100 paces N.W. from the Dumfries Road Bridge. This tree had seemingly been conspicuous from the Manse windows, and came to receive its name of Gowk Tree from the fact that Dr Walker had observed that it was on it that the cuckoo was first heard by him in the district. At that time the

whole field had been covered with trees, as the tradition or fact is (I can't vouch for its correctness) that when the proprietor was cutting down these other trees the Doctor paid him the full value of the Gowk Tree to allow it to stand. Its dimensions are :—Girth one foot three inches from ground, 12 feet 5 inches ; girth five feet nine inches from ground, 10 feet 11 inches ; length of bole, 9 feet. The three principal branches girth respectively 5 feet, 7 feet, and 7 feet 1 inch, about three feet above cleft ; height, 78 feet ; diameter of branches, 70 feet. The Gowk Tree cannot be far from being 250 years old, and is still sound and healthy, and appears to be in a flourishing condition, and it is undoubtedly the best grown and typical tree in the whole of Upper Annandale. The tree is very symmetrical, the branches being curved downwards, and reaching to within a few feet of the ground, and nearly completely hiding the trunk, so that the general appearance of the tree is like a solid ball.

The late John Brown has also enshrined the Gowk Tree in his "Musings and Maunderings," from which I make the following extract :—

Thou rare old oak, with massive trunk and arms thrown out around,
Thy bushy head with foliage dense o'er shades a rood of ground,
Thy heart within is sound and tight, as heart of oak should be,
And the landscape's pride and boast is just the Auld Gowk Tree.

The oldest residenter, whose boyish lore began
When the Auld Kirk was a-building and the roaring Dilly ran,
Marks scarce a change upon thee, and a twice as old as he
Would have found thee still at memory's dawn, the Auld Gowk Tree.

When, a century syne, the bank was cleared on which thou stands't alane,
And lots of kin and neighbours fell, their fate had been thine own ;
But Dr. Walker, good old soul, true friend of worth and thee,
Shelled out to save from axe and saw, the Auld Gowk Tree.

Some say the ransom was a pound, some say 'twas half-a-crown,
But gold or silver, sure enough his Reverence paid it down ;
And like the green bay flourishing, and fresh his memory be
Who saved our richest sylvan gem, the Auld Gowk Tree.

In Moffat walks there's elm and ash and mony a glossy beech,
Their whispering leaves just sound at eve like kindly, hamely speech ;
But which o' them, though tall and fair, can stir the heart like thee,
Or wake such tender memories as the Auld Gowk Tree !

Long may'st thou stand in veteran might, unscathed by bolt or blast,
The emblem of a grand old age, still glorious to the last :
And Moffat bards, a century hence, rejoice to sing of thee,
The chieftan of her sylvan race, her Auld Gowk Tree.

Lochwood Tower has long been famous for its old oak trees, and it is rather interesting to have a record of the measurements of some of these trees taken by Dr Walker about 120 years ago, and to contrast them with the present measurements of the oak trees growing there, and possibly the same trees as those measured by the Doctor (see Dr. Walker's Natural History article, "Catalogue of remarkable trees in Scotland"). Thus he says: "An oak which stands about due north from the old Castle, on the 29th of April was measured, and six feet above the ground was 14 feet in circumference. It was about 60 feet high, with a fine spreading head exactly circular, covering a space about 60 feet in diameter, and was the finest tree in the place, although another was measured which was near 15 feet in girth. There are a great number of oaks approaching nearly to the same size. From a few that were cut down they appear to be at present about 230 years old."

Since Dr Walker's day a number of these trees have fallen a prey to the ravages of time and the elements, and have completely disappeared. Those which are standing still look grand and stately in their decay, and bear evidence in their hollowed-out trunks and dead branches of their great age, which, if Dr. Walker's estimate be correct, must be somewhere about 350 years. They would also be sturdy young trees at the time when Robert Maxwell and his men, in the stirring times of Border warfare, set fire to Lochwood Tower and "gave Dame Johnstone light enough to set her silken hood."

In September, 1891, I measured a few of the oaks still remaining; the largest at two feet from the ground girthed 17 feet, with a length of bole of 16 feet. This, from its position, I have no doubt, is the same tree as the Doctor measured in 1793, which girthed 14 feet. I did not take the height of any of the trees there, but the girth and length of bole of a few others growing there are as follows:—Girth, 16 feet one foot from ground; girth, 16 feet five feet from ground; length of bole, 9 feet. Girth, 13 feet 6 inches three feet six inches from ground; length of bole, 8 feet. Girth, 12 feet 10 inches three feet from ground; length of bole, 13 feet. Girth, 12 feet 3 inches three feet from ground; length of bole, 4

feet. Girth, 13 feet five feet from ground ; girth, 10 feet 11 inches three feet from ground ; length of bole, 6 feet. The Doctor also gives the measurements of an ash and a plane tree at Lochwood measured April 29th, 1773. The ash was 70 feet high and girthed 10 feet 6 inches ; and the plane was about 50 feet and girthed 8 feet 9 inches. An ash growing nearly in front of Lochhouse Tower measured Sept. 26th, 1891 :—Girth, 10 feet 5 inches three feet from the ground ; length of bole, 9 feet ; spread of branches, 84 feet 6 inches, and is about 47 feet high.

Within the Bowling Green Grounds in Beechgrove there are the remnants of what used to be a magnificent row of beech trees, tall and stately, with fine clean boles. The third tree from Academy Road girthed 11 feet 3 inches at ground, and 9 feet 5 inches three feet from ground. The fifth tree girthed 11 feet three feet from ground, with a clean bole of 20 feet 6 inches, and will be about 110 feet high. A thorn growing at side of Selkirk road, between Millburn Bridge and Holmend, measured September, 1891 :—Girth, 5 feet 1 inch at one foot, and 4 feet 6 inches at five feet from ground ; length of bole, 8 feet ; spread of branches, 30 feet ; height, 37 feet. This will be about the finest thorn tree about the place, and formed one of a regular row of thorns planted along the roadside, which have all disappeared from sheer old age except three, which are still standing. One of them is, however, dead ; another is in nearly the same condition. The other, of which I have given the measurements above, is beginning to shew signs of decay likewise ; some of the outermost branches are dead. I have the measurements likewise of a few more trees, but as it would lengthen this paper considerably to describe them they may form the subject of a future paper. Besides, the main object of the present paper was to place on record the measurements, &c., of our historical Auld Gowk and Pouch Trees and the Thorn, while they are still standing.

IV.—“*Oyster Culture.*” By Mr Joseph J. Armistead.

In the Solway Firth, Mr Armistead mentioned, there are several good oyster beds which have been several times worked out, allowed to lie idle, when the oysters have reproduced themselves, and in a few years the beds have again been found productive. He especially mentioned one of Maryport, where he had counted as many as eighty boats engaged in dredging soon after a

bed deserted as worthless several years before had been re-discovered. When we considered the enormous reproductiveness of the oyster, it would be apparent that when we had become sufficiently acquainted with the habits and needs of the mollusc it will be possible largely to increase the supply by cultivation. The oyster is hermaphrodite, and produces a million young. It had been calculated that on some of the beds the number of young oysters given off at spawning time was something over two trillions, a number sufficient to stock the sea for miles and miles around. Yet we found that the oyster beds did not grow any larger. The oyster is an exceedingly delicate shell fish. It will only grow upon certain places, and these of very rare occurrence upon the sea bottom. A great part of our coasts consist of shifting sand or a bed of mud, and on these the oyster will not live. Even a rocky bottom is not suitable. It is upon sea bottoms where the currents deposit a considerable mass of shells and small stones that the oyster finds itself at home. The very best bed is formed by the shells of the oysters themselves. Then they require water of a particular density and to be protected from extremes of temperature. Ice water and snow carried down to the narrow seas or an enormous mass of fresh water poured in might injuriously affect them. Oysters cannot bear to be frozen, and for that reason few are found at places from which the tide recedes. When we get a great substratum of oyster shells the oysters are very prolific; but if the shells are carried away, as they are when the oysters are dredged and sent to market, the beds at last become worked up and destroyed. The little oysters pass from the parent like a small cloud, floating away to the sea. They soon rise to the surface, and are carried about by currents and tides, sometimes to great distances. Then they suddenly cease floating about, and fall gradually to the sea bottom—"fall to rise no more," unless the dredger pulls them up after a number of years. If they fall on to mud or sand they immediately perish; but when they come in contact with a favourable substance, they adhere to it and go on growing, and in the course of a few years are ready for the table. The oyster at this early stage was known as "spat." The length oyster cultivation has yet gone is about this, that by laying down a large number of brood oysters upon the oyster bed and allowing them naturally to give off their young, the sea water all around becoming charged with

them, a great fall of spat naturally takes place; but where the spat falls is a matter over which we have very little control. Mr Armistead explained, by means of diagrams, various methods adopted to intercept the spat; but observed that it was a great game of chance. Many other shell-fish, he explained, have a muscular foot, by which they may travel about, but the oyster has no means of locomotion, so that wherever it falls there it must remain, whether it is a suitable place or not. There are a great many places where oysters are found on this coast—on the coast of Colvend, of Rerrick, in Wigtown Bay, in Luce Bay, and the oysters of Lochryan are famous. We found nature producing them close upon our shores. They increased enormously when let alone; and it was only undue and improper fishing which impoverished the beds. The star fish and the whelk were mentioned as destructive enemies of the oyster. Reference was made to the great extent to which oyster culture is carried on in France, the lecturer mentioning a report that on one day when the tide ebbed to an unusually low point in the Bay of Arcachon no fewer than 8500 people went down to pick up the oysters, and they collected in three hours—while the tide was out—about forty millions. These were put down on the little oyster farms into which the bay is divided, to be reared until their value was probably doubled. It was a mistake to suppose that oyster culture could be undertaken at very little expense. The cost of properly preparing the ground was about £200 an acre. Mussels might be cultivated in much the same way and more easily, and were cultivated largely on some parts of the coast. Anyone on the Solway could grow any quantity of mussels in a short time by just putting stakes into the sand and letting them remain. In a few years they became mussel beds. Mussel spat rested upon them and grew upon them. Some of the finest mussels he had ever seen were grown on the old wrecks on Barnhourie and elsewhere in the Solway. He hoped to see those who lived on the coast endeavour to replace the oysters where mussels have taken their place.

6th May, 1892.

MR JAMES G. H. STARKE, M.A., V.P., in the chair.

Donations.—A Silver Groat of Edward III. ploughed up near St. Queran's Well, presented by Mr Dudgeon; Catalogue of Pre-historic Works East of the Rocky Mountains; and the Omaha and Ponka Letters from the United States Bureau of Ethnology; Proceedings of the Berwickshire Naturalists' Club, 1890; Journal of the Elisha Mitchell Scientific Society of North Carolina; Transactions of the Edinburgh Geological Society, 1891; the Report of the Marlborough College Natural History Society, 1891. A number of cuttings from mummy-cloths, containing illustrations of the departed spirits, presented by Dr James Grant, of Cairo.

COMMUNICATIONS.

I.—*Note on Bronze-Socketed Axehead found by Mr Baxter at Annan.*

By Mr JAMES LENNOX, F.S.A., Hon. Librarian.

Its length is $4\frac{1}{2}$ inches, breadth across the face $2\frac{1}{2}$ inches, greatest width of socket $1\frac{1}{4}$ inches, depth of socket $3\frac{1}{2}$ inches. On one side there is a loop for fixing it to the handle by a thong. The only decoration is a raised triangle on either flat side (this is distinctively a decoration of the bronze period). These axe-heads were cast in stone moulds, with a clay core, and this shape (with or without decoration) is the commonest variety found in Scotland. There are examples of them from every part of Scotland in the National Museum of the Society of Antiquaries. The alloy used is about 90 parts of copper to 10 of tin. As will be known by most of you, our Pagan age is divided into stone, bronze, and iron; the bronze is sub-divided into early and secondary, and it is to this latter period that this specimen belongs, but even in these early times the arts in Scotland were much further advanced than is commonly believed.

II.—*Remarks on an Old Coin found near St. Queran's Well.*

By Mr PATRICK DUDGEON, F.S.A.

The coin is a silver groat of the reign of Edward III., and is in an excellent state of preservation. The legend on the obverse is

EDWARD · DI · REX · ANGL · FRANC · D · HIB ·

On the reverse—

POSVI · DEVM · ADIVTOREM · MEUM.
CIVITAS · LONDON.

The coin not being found in the well, it is, of course, not quite certain it was thrown into it as an offering to the tutelary saint, but coins had been picked up in the vicinity of the well from time to time long before it was thoroughly put in order twenty-one years since, when many hundreds of coins were found. These coins so found had doubtless got thrown out of the well in some way or other. As the well had been long used as a watering-place for cattle on the farm, coins scattered about in the immediate vicinity can easily be accounted for. Not one silver coin was brought to me by the workmen engaged in cleaning out the well. I have no doubt some — it may be a considerable number—were found, as I heard some time afterwards coins had been offered for sale to several persons in Dumfries similar to the ones found in the well. Any silver ones found at that time no doubt went to procure liquid more acceptable to the tastes of the labourers than that provided by the Holy Well of St. Queran. My keeper, a month or two ago, was clearing out the rubbish, leaves, &c., which had got into it, and brought up a number of pennies, halfpennies, and farthings of the present bronze coinage, and two or three of those small brass oval medals of the Virgin, very common amongst the Roman Catholics in the district. I was very much surprised to know that offerings are still made at the holy wells, and have told the circumstance to several Roman Catholic gentlemen, who all expressed their surprise. They had no idea the practice now existed. The well has never been touched since it was cleared out twenty-one years since till these pennies, &c., were found.

III.—*Folk Riddles.* By Mr JOHN CORRIE.

The pastime of asking riddles may be traced back to very early times. Samson, we know, propounded a riddle at his marriage feast, and when the Queen of Sheba paid her celebrated visit to Solomon we are told that she tried him with “hard questions,” and he answered all of them. In later times the Greeks and Romans bestowed much attention upon the riddle, and in our own country one of the first books published was a collection of riddles entitled “Demands Joyous,” a work of which one copy only is said to be extant. Most of the riddles in vogue

nowadays are of the punning kind, and we cannot help thinking that they compare very unfavourably with the early allegorical riddle. Many old riddles possess considerable antiquarian value. Here, for instance, is an example which takes us back to the time when the stone hand-mill was in use throughout our land :—

As I gaed ower the heather hill
I met the bull of Beverlin,
I dashed his heid against a stane,
White as milk cam' back again.

Ans.—Corn ground between two stones.

This interesting example, taken down from the dictation of a hill shepherd in Kirkcudbrightshire, appears to be somewhat defective in form, but I have not felt at liberty to alter, as variations in form are in themselves interesting and valuable. Here is a riddle which is evidently contemporaneous with the old pack-horse days :—

What is't that gangs across the water, an' across the water, wi' the
braid side foremost ?

Ans.—A lade o' meal on a horse's back.

Nobody thinks of placing a bag of meal on a horse's back nowadays, but at one time not only meal but coals, and indeed most domestic commodities, were carried in this fashion. A large proportion of riddles are of a distinctively domestic character. Thus, the fire and fireplace, the tongs, the kettle, the girdle, the candle, the besom, have all at one time or another exercised the ingenuity of the riddle maker. Here is a very concise example :—

What's red below, black in the middle, and white abune ?

Ans.—A girdle of scones on the fire.

The fire, of course, is red, the girdle black, and the scones white. Take another example of this class :—

Twa lang legs, nae body, and ae heid ?

Ans.—The tongs.

Some may demur to the description “nae body,” but it is strictly accurate, for most early examples of tongs consist of legs and head only. Finally, see what imagination can do for a “tallow dip.” This is how a candle is described :—

Jenny wi' the white petticoat and the red nose,
The langer she stands the shorter she grows.

We have seen that the asking of riddles was practised in Bible times, and it is interesting to observe that many old riddles are more or less Biblical in character. Take the following :—

We are two sisters' sons, we are two brothers dear,
Our father was our grandfather, it's queer our kin's so near.

Ans.—The sons of Lot's two daughters.

A deep, deep dungeon, a dark, dark cave,
A leevin' man, and a leevin' grave.

Ans.—Jonah in the whale's belly.

Peter alone of New Testament worthies comes in for notice, and the reference is an incidental one :—

There lives a prophet in the land,
No man his age can tell,
And he was at his greatest height
Before that Adam fell.
He was with Noah in the Ark,
With Adam in Paradise,
And helped Peter at a time
To gain his soul a prize.
He wears a robe about his neck,
It is for ever new,
And there's no a shoemaker in the land
Can fit him for a shoe.

Ans.—The cock.

Some of the examples from animated nature are specially interesting. Listen to this :—

A lang man, legless, cam' tae oor door fitless ; says he, “ Guidwife,
keep in ye're hens, as for ye're dougs I carena.”

Ans.—A worm.

Or this :—

As I gaed ower London Brig,
I met my uncle Tam,
Wi' a' the warl on his back,
He was a mighty man.

Ans.—A mole.

In this riddle the word “house” is sometimes substituted for “warl” or world, and the answer is then “A snail carrying his shell.” Here is a more intricate example :—

As a gaed ower yon heathery hill
I met John Reekum-teekum-tanguil
Carrying away a poor demaujil ;
I took up my hunjil-cunjel-caujel,
And made John Reekum-teekum-tanguil
Lay down the poor demaujil.

Ans.—A fox carrying a lamb away, when a man with a stick attacks the fox and causes it to lay the lamb down.

The "human form divine" has not been overlooked. Here is an example which has the fingers for subject :—

What is't that never was and never will be,
I hae't in my han' tae let ye see ?

Ans.—The fingers all one length.

This riddle seems to have been modelled upon a "Demand Joyous" type, for in that curious collection we have the following :—

Demand.—What is it that never was and never will be ?

Response.—A mouse's nest in a cat's ear.

Opinions will probably differ as to the merits of the two examples. The following on the teeth, although defective in point of accuracy, is excellent in other respects :—

Four-and-twenty white kye
Standin' at a stall,
Oot cam' the reid bull
And licked ower them all.

Ans.—The teeth licked by the tongue.

Sometimes a higher flight is attempted. Take this, for example :—

Doon in yon meadow grows a bunch o' willow wands ;
Naebody can count them but God's ain hands.

Ans.—The hairs of the head.

The sun, the moon, frost, snow, and other natural phenomena, occupy a prominent place in the folk-riddle. We content ourselves with a single example, and it is selected chiefly on account of its seasonableness :—

Hickerty-pickerty pinned the yett,
Hickerty-pickerty pinned it weel ;
Hickerty-pickerty pinned the yett,
Withoot aither ern or steel.

Ans.—Frost.

Abstract subjects are rarely chosen, but we know of one exception so excellent we could have wished for more. This is how the poignancy of hunger is depicted :—

As I went ower ayont yon dyke,
I fun a wee pen-knife ;
It could kill a hare, it could kill a bear,
It could kill a hunner men an' mair.

Ans.—Hunger.

I have thus glanced at a few lingering examples of the folk-riddle. My gleanings may not contain much that is new, but they may help to direct attention to a subject which, although

often spoken of as puerile, is in reality of great ethnological and antiquarian value.

IV.—“*Notes on some Scotch Plants, especially with relation to Dumfriesshire and Galloway, and their relation as Native Species.*”

By Mr ARTHUR BENNETT, F.L.S., of Croydon.

I think I am correct in saying that the late Mr H. C. Watson was rather too doubtful of the claims of many species to be native in Scotland. Plants that “run out” in the north midland counties of England appear sparsely, and then only in limited areas in the northern counties, and then again appear in the southern counties of Scotland, were held by him to be in many cases dubious natives of Scotland. Dr Buchanan White, in a valuable paper read before the Perthshire Natural History Society, has discussed with much care the claims of many of these as natives of Perthshire. I here propose to notice some of them, and to see how their northern extension into Scandinavia, where they have to bear much colder though drier winters, and in some localities much hotter summers, especially in some of the valleys of the remarkable Sogne Fjord in Norway, lends itself to their being Scotch plants.

Ranunculus fluitans, Lam.—Should occur in one of the counties; it is recorded for Roxburgh, Lanark, and Berwick.

Caltha palustris, L.—Of this genus a monograph has just been published, many European forms are named; specimens require to be collected to see under what our plants come.

Aquilegia vulgaris, L.—Seems to be doubted as a Scottish native; its distribution on the Continent does not lend itself to favour this idea. Occurs in Norway, and in Sweden north to Dalarne, and accepted as indigenous in Finland in several localities.

Draba incana.—From Cumberland, not on record until Mid Perth; surely will occur in one of the counties; occurs quite low in Caithness.

Cardamine impatiens.—Admitted doubtfully for Ayr by Watson; the localities in Dumfries are not commented on as to their status by either Mr M'Andrew or Mr Scott-Elliot. It occurs in South Norway, in Sweden north to Vermland, but is not recorded for Finland.

Nasturtium amphibium, R.Br.—Recorded for Dumfries (1789) in a locality that reads native. A species that ought to be a native

- surely. Rare in Finland. North to Vermland, in Sweden. Perhaps doubtful for Norway.
- Reseda lutea*.—To be looked for. Doubted as Scotch native, but Dr B. White thinks it may be so in Perthshire.
- Viola Reichenbachiana*.—On record for Perth and Shetland only, but it surely occurs in the south. Flower generally smaller, spur blue, smaller, and more tapering.
- Cerastium aquaticum*.—Confused with *C. nemorum*? Will surely be found as a native in S. Scotland. Sparingly in Norway. In Sweden rarely in Gefleborgs län. In southern Finland.
- Rhamnus catharticus*, *L.*—Watson queries this for Dumfries, and Mr M'Andrew adds "perhaps introduced." Sparingly in southern Norway. In Sweden north to Gefleborgs län. In Finland rare in Aland Islands, and the extreme south-western corner near Abo.
- R. Frangula*, *L.*—Much more plentiful, and farther north.
- Trifolium scabrum*.—To be sought for; *T. striatum* gathered in Wigton by Mr M'Andrew. These clovers require to be looked for in June; they soon become burnt up with continuous dry weather.
- T. fliforme*, *L.*—Recorded for Roxburgh, and sent me from Inverness last year by Mr A. Somerville; here again, this must be sought early in June, it must be more frequent than recorded. Occurs rarely in South Norway. In Sweden to West Gotland. Not recorded from Finland where *T. spadiceum*, *L.*, and *T. agrarium*, *L.* take the place of our procumbens and minus.
- Lathyrus palustris*, *L.*—Recorded for "Galloway," Wigton, but no recent confirmation of this species as a Scottish plant. In England it occurs north to Yorkshire; but it is distributed nearly over the whole of Sweden to Lapland; in Norway; and in 23 (out of 28) of the botanical provinces of Finland. It may be its habitat has been destroyed by drainage, as it is essentially a marsh plant.
- Sibbaldia procumbens*.—Watson records this doubtfully for Dumfries. I do not find it mentioned in Mr M'Andrew's list. It occurs below 1500 feet in Shetland. It seems to be certainly found in Peebles, so its occurrence is not unlikely on the higher ground around Hartfell, &c.
- Rosa involuta*, *Sm.*—I know of no record of this, but it occurs in Cumberland, Lanark, and Berwick, and will likely be found.
- Silvaus pratensis*.—Should be sought for; occurs in Cumberland and Berwick. Very rare in Sweden. Not recorded for Norway or Finland, but in Scotland to Fife and Edinburgh.
- Polygonum mite*.—No record for Scotland; but I do not see why it should be absent. Fairly distributed over Sweden and Finland,

but absent from Norway. I look for its occurrence in Southern Scotland.

Sclerochloa Borreri.—Should occur on the coasts; occurs north to Iceland.

No doubt one element against the occurrence in Scotland of some Scandinavian species is the humidity, although the average summer temperature in Scotland is higher than many (or most) places in the same latitude, especially in Finland and Eastern Sweden; yet the aggregate heat in June, July, and August is higher in those parts, yet the winters are much colder, but protection to vegetation is afforded by deep snows. I think that the work done in topographical botany in northern Scotland these six or seven years past shows that many species do occur much farther north than has been supposed. Of course, much care is needed to examine the surroundings of many plants as to their possible introduction.

V.—“*Bee Folk-Lore.*” By Mr P. DUDGEON, F.S.A. (Abridgedd.)

It would have been a matter of surprise if amid the multitude of superstitious beliefs which existed, and still exist, concerning so many different things that bees had been overlooked. This is very far from being the case, however. From the earliest times these interesting little creatures have attracted the attention of all nations and peoples. Greek and Roman philosophers have devoted much time in observing their habits, and when we see the wonderful instinct they display, the perfect organisation of their societies, where every bee, as it were, is told off to do its own particular work, the foresight they display in storing up food, the care they take of their young, &c., it is not at all to be wondered at that in earlier times they were looked upon as creatures possessing much more than what is called “instinct,” and that they were endowed with something approaching to reasoning powers and almost human intelligence. It was regarded as necessary that great respect should be shown them; they were never to be alluded to in a slighting way; that no derogatory remarks about them should be uttered, particularly if they were within hearing; and that every consideration should be conceded to them in what were thought to be their wishes, or even caprices. An almost poetic feeling is seen to run through some of the superstitions connected with them, quite wanting, or at all events seldom found, in other

superstitious beliefs ; and being anxious to find out if any of these old superstitions still existed in Scotland, a circular letter was addressed to a good many clergymen in the rural parishes of the southern part of the country, giving the heads of the points I wished information upon, and asking their kind assistance in the matter. Comparatively few answers to the appeal were received, and still fewer that bore at all on the subject of my inquiries. From a few of my correspondents, however, some very interesting information was obtained, and to these gentlemen I have to return my best thanks for the trouble they have taken in assisting me. In only two or three cases can it be said there is any *direct* evidence of these superstitions being still current amongst the country folks, but there is no doubt that some of them, at all events, do exist both in this country and in some of the English rural districts. Country folk are generally exceedingly reticent when questioned about matters of this kind, and it is difficult to find out, from their answers, whether they believe or not. As one of my correspondents says, in accounting for the small success he had, "Superstitious people generally have a great disinclination to exhibit their superstitions before educated people especially." This is quite true, as any one must have observed in prosecuting inquiries of the kind. An instance came under my observation the other day (from Suffolk) of the belief that if bees were not formally informed of a death occurring in the family they would die. "When grandfather died mother went round to every hive, and tapped it, and told the bees, and, oh ! they did set up a howling." An old man who was present remarked—"Bees don't want no talk about 'em ; if there's a fuss over 'em they'll do no good. Now, my wife there don't like bees ('but I never say so,' put in the wife), so I doubt my stock won't do. They'll have no talk about 'em ; they won't do unless things is as they like, and you can't force 'em." The method adopted for informing the bees of a death, as alluded to above, is by going to each separate hive and whispering to the inhabitants that so and so was dead, and this was more particularly necessary if the death happened to be the head of the family. One of my correspondents writes : "I was visiting a woman after the death of her father. She told me all the bees had died ; 'of course they were hardly expected to live,' she added. 'Why ?' I asked. 'Because,' she said, 'bees mostly die after a death in the house.'" He further adds, "I suspect that

quite a number of old people still hold firmly superstitious beliefs regarding their bees." I have several other instances given to me of this custom, but they mostly relate to forty or fifty years since. Whittier, the American poet, in a poem entitled "Telling the Bees," alludes to this custom, as also to that of putting the bees in mourning, which is another attention it was deemed necessary to pay to bees on a death taking place in the family. This is done by draping the hives with black ribbons, shreds of black cloth, or such like. A correspondent writes: "Ten years ago my mother died, and when her cousin Mrs R—— came to the funeral she asked if the bees had been told of the death, and after she left I believe she regretted not having tied something black about the 'skeps.' Whether she was animated by actual superstitious belief in what she said, or in deference to an old custom, I do not know." I was speaking shortly since to a gentleman belonging to this district about these superstitions, and mentioned the custom of putting the bees into mourning. He said, "Oh! I have seen black ribbons on the hives in remote parts of the country, but never knew what it meant." The custom was very general some time ago, and several of my correspondents mention instances of old people having seen it observed. It is not altogether extinct yet. Perhaps the most pleasing of all the superstitious beliefs connected with bees is the idea of their singing a hymn on Christmas eve (old style). One of my correspondents says "he remembers, when he was a boy, his grandfather taking him to a 'skep' in the winter time, and making him listen to the bees singing a hymn," but he has no recollection whether it was Christmas day or not; no doubt it was. An old man I have heard of in Kirkbean, who died about thirty years ago, always maintained that the bees sang a hymn on Christmas day. This pretty superstition has, I fear, quite died out. As the old Suffolk man, alluded to above, said, "they 'ont do unless things is as they like." The belief was universal at one time that the susceptibilities of bees were offended if sold for money, and in the remoter rural districts this idea is still found to exist. Many quaint devices were used by people who wished to possess bees, and those who were willing to part with them, in order to get over this difficulty. One correspondent writes me that an old farmer told him that in his early days they had a custom called "half manner," which was that anyone who wanted bees took them upon the understanding

that half their produce for a fixed number of years was to be returned to their former proprietor. Another says—"While it was considered most unlucky to sell bees for money, the lifting them at night and carrying them away in a theftuous manner, leaving money on the empty stand as compensation, was considered the right and proper way of gaining possession of a coveted hive." Other methods were adopted, such as exchanging a hive for some kind of produce (*e.g.*, corn, &c.) to the value of the price previously agreed upon. I confined my inquiries regarding these superstitions connected with bees almost entirely to the Southern Counties of Scotland, but they prevail, or did so, over the whole kingdom, wherever bees were kept. They must have existed before the invasion of the country by the Teutonic races; and in all probability their origin is to be found in the Eastern races, who gradually took possession of Western Europe. The same superstitions are to be found in many parts of the Continent. Brand, in his "Popular Antiquities," mentions several of these superstitions as current in different parts of England, particularly as to informing bees of a death and putting them in mourning. He also alludes to a custom which prevailed in Devonshire, of turning the bee-hives round when the deceased owner's body was carried out of the house for burial; and he gives an amusing story of the result of this custom on one occasion: "At a funeral some time since, at Collumpton, of a rich old farmer, a laughable circumstance occurred, for just as the corpse was placed in the hearse, and the horsemen, to a large number, were drawn up in order for the procession of the funeral, a person called out, 'Turn the bees,' when a servant who had no knowledge of such a custom, instead of turning the hives about, lifted them up and then laid them down on their sides. The bees thus invaded instantly attacked and fastened on the horses and their riders. It was in vain they galloped off—the bees as precipitately followed, and left their stings as marks of their indignation. A general confusion took place, attended with loss of hats, wigs, &c., and the corpse during the conflict was left unattended, nor was it till after a considerable time that the funeral attendants could be rallied in order to proceed to the interment of their deceased friend." The Rev. Dr Atkinson, in his charming work, "Forty Years in a Moorland Parish," gives several instances of these superstitions connected with bees as having been general in Yorkshire, precisely the same as has been

narrated above. They are also alluded to in the Rev. Wm. Morris' "Yorkshire Folk-Talk," who mentions a custom I have not met with before—the practice of providing the bees with part of the *arval*, or funeral entertainment; a small portion of every item of the feast—including even salt, mustard, wine, tobacco, and pipes—were put on a plate, and placed in a convenient spot near the bees. Mr M. on one occasion expressed his surprise to an old woman at tobacco being given, and asked if they ate it. "Aye," she said, "ah seed it mysen." "Well, at all events, the bees could not eat the pipes," said Mr M. "But they did, 'owever." "How in the world could they do that?" he asked. "Aw," she exclaimed, "they teeak a steean an' mash'd 'em up into a poodher, an' mixed it wi' th' stuff an' gav it tiv 'em." "And did they eat it clean up?" he asked. "Aye, hivvry bit, ah seed it mysen." Mr M. remarks, "it was evidently thought that it was their being fed in this way alone that had preserved them from dying with their master." In a letter I received from the Rev. Dr Stewart, Nether Lochaber, he mentions a curious superstition: "The only superstition about bees in the West Highlands is not about the hive bee, but about the large ground wild bee, *Bombex Terrest*. In the popular superstition these are believed to be a large company of Finglian heroes under enchantment of a powerful sorceress in the North. Their stings are their swords. They are destined yet to disenchantment, once again assuming their proper forms, and then they will drive all foreigners out of the country! The allusion is probably to the old Viking times."

VI.—*Notice of various Antiquities found in Dumfriesshire, and now preserved in the National Museum in Edinburgh.* By GEORGE F. BLACK, Ph.D.

In a former paper communicated to the Society I described the prehistoric antiquities of stone and bronze from Dumfriesshire preserved in the National Collection, and in the present notice I propose to describe the miscellaneous objects of later date.

SCULPTURED CROSS-SHAFT.

The first specimen to be described is the portion of sculptured cross-shaft discovered in 1815 in taking down the walls of the old Church of Hoddam, supposed to have been dedicated to St.

Kentigern¹. It is of fine red sandstone, and measures two feet in height, nine and a half inches broad at the base, and is six inches thick. On the front of the stone is a draped figure standing under an arched pediment, having a nimbus, and holding a book in the right hand. Above the pediment are the heads of two figures, much defaced, probably of angels. On each of the sides is a half-length figure of a saint, each with nimbus and book. The back of the shaft has also been sculptured, but the carving has been nearly all chiselled or worn away. On the lower part, however, the outlines of two human figures can be made out. In all probability this portion of cross-shaft is of contemporary date with the famous rune-inscribed cross at Ruthwell.



Fig. 1. Sculptured Cross Shaft from Hoddam. p. 12.

The late Sir Daniel Wilson, in his *Prehistoric Annals*, states that the late Charles Kirkpatrick Sharpe informed him "that a sculptured stone built into the wall of the ancient Church of Hoddam bore an inscription of some length in Runic characters. Of this he made a copy before the final demolition of the ruined church, in 1815, but he had since sought for the transcript in vain. The original, it is to be feared, no longer exists."² The cross-shaft is shown in the accompanying figure, and has been figured by Wilson at the place cited, and also in the *Proceedings of Society of Antiquaries of Scotland*, Vol. i.,

CROSIER.

Another object, also from Hoddam, is the front portion of a crosier-head of bronze, richly ornamented with interlaced and

¹ *Scotland in Early Christian Times*. First Series, p. 225. Prior to the Reformation the Church of Hoddam belonged to the Archbishop of Glasgow, and was united to Ecclefechan by Act of Parliament on 24th June, 1609—*Fasti Eccles. Scot.*, pt. ii. pp. 620-621. The parish of St. Mungo (formerly called Abermilk) is also called after Saint Kentigern—*New Statistical Account*, Dumfries, p. 203.

² *Prehistoric Annals of Scotland*, Vol. ii., p. 329.

dragonesque work and inlaid with niello and silver. It has six sockets, three on each side, in which at one time were probably precious stones or settings of enamel. It was formerly in the collection of the late Charles Kirkpatrick Sharpe, and was purchased for the Museum at the sale of his collection in 1851. It has also been figured.¹

BRIDLE-BIT.

The bronze bridle-bit here described was presented to the National Collection in 1785 by Dr Robert Clapperton. The mouth-piece of the bit is in one piece, and measures only $3\frac{1}{4}$ inches in length, while the cheek rings are $2\frac{1}{16}$ inches in greatest length, by $2\frac{1}{2}$ inches across. The outer part of each ring is considerably worn by use, and a narrow strip of metal has been neatly riveted on the under or inner side to strengthen them. The other loops have also been strengthened by thin plates of metal being wrapped round them. It will be observed that the ornamental design of each outer ring differs considerably. The decoration of the plates within the rings has consisted of *champlevé* enamel of different colours, alternating in alternative rows in the triangular and oval spaces, of which the red only

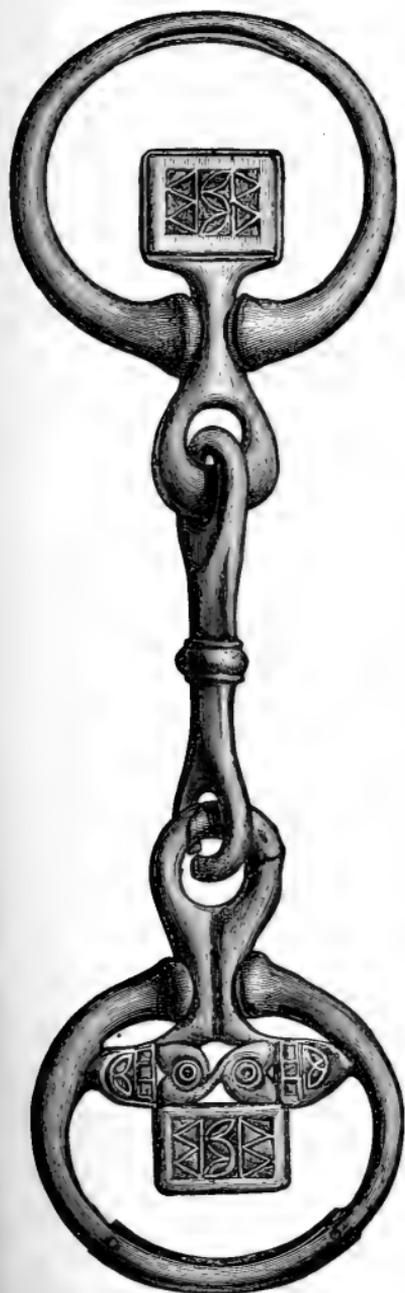


Fig. 2. Enamelled Bridle-Bit from Birrenswark.

¹ *Proceedings of Society of Antiquaries of Scotland*, Vol. xii., p. 164; *Scotland in Early Christian Times*, First Series, p. 225.

now remains. The double spiral and trumpet pattern characteristic of "Late-Celtic" ornament occurs on the open work of one loop. Enamelling appears to have been an art peculiar to the Celtic tribes of Britain prior to and after the period of the Roman invasion of Britain. The only classical author who mentions the art of enamelling is Philostratus, a Greek sophist, and a member of the circle of literary men which Julia Domna, wife of the Emperor Severus, drew around her. In his work on *Imagines*, in describing a picture of a boar hunt, he mentions the harness of the horses as being enriched with various colours, and adds (lib. i. xxviii)—"It is said that the barbarians who live in the ocean pour these colours on heated brass, and that they adhere, become as hard as stone, and so preserve the forms that are made in them." Some writers have supposed that by the "barbarians who live in the ocean" Philostratus meant the Gauls, but there is no doubt the passage refers to Britain. The bridle-bit is shown in figure 2, and has also been figured elsewhere.¹

ANCIENT BRITISH GOLD COIN.

On the 27th November, 1861, the gold coin here described was found in a garden at Birkhill, near Dumfries. It has been figured and described in the *Numismatic Chronicle* (Vol. ii., New Series, pp. 153-159) by Dr (now Sir) John Evans, and in the *Proceedings of the Society of Antiquaries of Scotland* (Vol. iv., pp. 432-436) by the late Mr George Sim. Sir John Evans, in his description of the coin, says²:—"The type is already well known, but this specimen, though not in fine preservation, is remarkable as giving the whole of the legend—either the initial B or the final C being usually wanting on these coins, on account of the flan being generally smaller than the dies, as is so commonly the case with the coins of this series. On the obverse is BODVOC in large letters across the field, and on the reverse is a disjointed three-tailed horse to the right; above two ring ornaments and a crescent; below a wheel, behind a pellet. From some specimens the whole appears to have been surrounded by a circle of pellets set at a

¹ *Prehistoric Annals of Scotland*, Vol. ii., pl. xi.; *Proceed. of Society of Antiquaries of Scotland*, Vol. iii., New Series, p. 320; *Scotland in Pagan Times: Iron Age*, p. 124; *Catalogue of National Museum*, 1892, p. 198.

² *Numismatic Chronicle*, Vol. ii., New Series, pp. 153-154.

little distance apart. The usual weight of these coins is from 83 to 85 grains; in the present instance it is $80\frac{3}{4}$ grains, the coin having lost to some extent by wear." In conclusion, he says:—"Unsatisfactory as it may appear, the whole that can with certainty be predicated of these coins is, that they were struck in the western part of England at a rather late period of the British coinage. To this may be added the probability that on them is preserved a portion, or possibly the whole, of the name of some prince, and that he reigned over the Boduni."

GOLD LUNETTE.

A very fine gold lunette, found in ploughing on the farm of Auchentaggart, in the parish of Sanquhar, during the winter of 1872-73, was deposited in the National Museum by the late Duke of Buccleuch. When found it was folded up and rolled together almost like a ball. It measures nine inches in greatest breadth, and is formed of a band of thin beaten gold $2\frac{1}{4}$ inches in breadth at the middle, tapering to the ends, each of which terminates in a disc-like expansion at the end of a slightly twisted neck. A small portion of one of the discs appears to have been broken off and the disc re-mended, as there are nine small perforations along the broken edge. The upper side of the lunette is ornamented by bands of parallel lines along each margin and at each extremity by bands of ziz-zags and dots. The weight is 4 oz. 1 dwt. 5 grs. Two similar lunettes are in the National Collection, one of which was found at Southside, near Coulter, Lanarkshire, and the other near Fochabers, Elginshire. In Riddell's MSS. (Vol. viii., p. 284) mention is made of what appears to have been another of these gold lunettes. Riddell's words are:—"Several Roman Antiquities have been found near Moffat, such as gold rings with gems in them, and not long ago [*i.e.*, before May, 1790] a fragment of a golden gorget, which weighed seven guineas, was purchased here by Dr Walker, late Minister of Moffat, now Professor of Natural History in the University of Edinburgh." Needless to say nothing is now known of this "gorget." These lunettes are more numerous in Ireland than in Scotland, the Museum of the Royal Irish Academy¹ possessing (in 1862) no less than fifteen specimens, eleven of which are complete; and there is another Irish one in the National Museum in Edinburgh.

¹ *Catalogue of Gold Ornaments in Museum, R.I.A.*, pp. 10-17.

BROOCHES, RINGS, &c.

Three brooches of silver, found in the ruins of the ancient Church of Middlebie, Annandale, in 1849, were presented to the National Museum in 1851. One is formed of a plain ring two inches in diameter, open to allow the pin to slip on. The second measures $1\frac{3}{4}$ inches in diameter, and is ornamented with four quatrefoils, one of which is on the hinge of the pin, and all show traces of having at one time been gilt. Equidistant between each of the quatrefoils is a globular swelling or ball, partly roughened with a prickly-like pattern. A similar specimen, but larger, found in the Tyne, is in the Museum at Newcastle-on-Tyne.¹ Another, 3 inches in diameter, with six knobs, found near Norham Castle, Northumberland, is in the National Museum. The third is an amulet brooch in the form of a flattened ring, $1\frac{7}{8}$ inch in diameter, and bears on its upper face a talismanic inscription common on brooches of the thirteenth and fourteenth centuries, as follows:— “† IHESVS·NAZARENVS·REX·IVDE.” Several similarly inscribed brooches have been found in Scotland and England.

About the beginning of the year 1864 an interesting hoard of brooches and rings was discovered in the course of ploughing a field on the farm of Woodhead, Canobie, consisting of two perfect brooches and portions of two others, all of silver, two gold finger rings, several jet beads, and a number of silver coins. The finest of the brooches (fig. 3) is formed of a rod of silver, $2\frac{3}{4}$ inches in diameter, and is ornamented with six rosettes, alternating with six prickly knobs arranged at equal distances. A prickly knob also surrounds the hinge end of the pin, which is, unfortunately, imperfect at the point. The knobs appear to have originally been gilt. A somewhat similar brooch, found at Carisbrooke Castle, Isle of Wight, is assigned to the early part of the fifteenth century.² Another, with four rosettes and four knobs, found at Langhope, Roxburghshire, in 1882, is in the National Museum. The second perfect brooch (fig. 4) found at Woodhead, is talismanic like the one found at Middlebie. It measures $2\frac{3}{16}$ inches in diameter, and is inscribed “† IHESVS·NAZARENVS·REX.” The third is a fragment similar to the one first described, and has been $2\frac{1}{2}$ inches in diameter when perfect. It still shows two rosettes and one knob,

¹ Scott, *Antiquarian Gleanings in the North of England*, pl. xxxviii.

² *Archæological Journal*, Vol. ix., 1852, p. 110.

The finger-rings are of thin sheet gold, and consequently are hollow. One (fig. 6) is plain and set with a pebble, which is pierced longitudinally, as if it had formerly been a bead. Surrounding the pebble are six small settings for stones, two of which contain emeralds. The second ring is also plain, and has a single pebble setting. The beads are of jet, fifteen in number, twelve of which are of oblong barrel shape, from $\frac{3}{8}$ inch to $\frac{1}{2}$ inch in length, one flat circular and $\frac{1}{4}$ inch in diameter, and two square shaped, measuring $\frac{1}{2}$ inch each way and $\frac{1}{4}$ inch thick. The corners of both of these beads are bevelled.

The coins numbered fifty-three in all, and consisted of pennies of Edward I. and II. of England, of various mints; one of Alexander III. of Scotland, and two of John Baliol. The coins are of importance as enabling us to fix a date for the brooches and finger-rings, which may be assigned to the end of the thirteenth or beginning of the fourteenth century.¹

In 1878 a curious discovery was made in the wall of an old house in Dumfries, consisting of a number of coins, silver brooches, &c., oxidised into a mass. The coins number about one hundred and fifty, and are all billon pennies of James I. of Scotland. Of the brooches, one is a plain ring, $1\frac{3}{8}$ inch in diameter, with pin; and there are portions of two other similar brooches. A half of another brooch, 1 inch in diameter, has three sockets standing up from the upper face, in two of which are garnets. There is also a small cross pendant $1\frac{3}{8}$ inch across the arms, which are of equal length, and have globular ends. A small chain of interlaced rope pattern, probably for suspending the cross, completes the lot.

CARVED DOOR, &C.

There is a carved wooden door from Amisfield Castle, 5 feet 7 inches in length by 3 feet in breadth, with a representation of Samson rending the jaws of the lion. It is a most grotesque piece of work. Grose refers to it as follows:—"On one of the doors [of Amisfield Castle] is the figure of a man, tearing open the jaws of a lion, most barbarously carved in basso-relievo, and most tawdrily painted. The carver was undoubtedly the same that cut the figure of Sir Herbert Herries in Trelegles Church."² The

¹Three of the brooches and one ring are shown on pl. viii. vol. v. of *Proceedings of Society Antiquaries of Scotland*, reproduced in figs. 3-6.

² *Antiquities of Scotland*, vol. i. p. 158.

door has been constructed to open on pivots instead of hinges. On the upper end are two shields, one with the armorial bearings of the Charteris family, the other with the monogram A.M. Above is the date 1600. The door belonged to the room over the "King's Room."

Two bed-posts of oak, each eight feet in height, which formed part of the State-bed of Amisfield Castle, are also in the Museum. The lower part of each post is square, and is ornamented with incised concentric circles. The upper part of each post is cut into a spiral, resembling a thick rope. King James VI. is said to have slept on the bed on his way to England. The bed is also referred to by Grose.

TRIPOD EWERS AND POTS.

Of tripod ewers of bronze or brass from Dumfriesshire there are two in the National Museum. One found at Birrens in Annandale is $8\frac{3}{4}$ inches in height, $5\frac{5}{8}$ inches in diameter, contracting to $3\frac{1}{2}$ inches across the lips. The handle is one inch in breadth, flat, and unornamented. The spout terminated in the rude resemblance of an animal's head. The second ewer, found in a moss near Closeburn Hall, is of a different form, and more resembles a jug with three feet. It stands $8\frac{1}{4}$ inches high by $5\frac{1}{8}$ inches in greatest diameter, and has a socket for the hinge of a lid. A specimen similar to the one found at Birrens was described in the *Transactions* some time ago. It was found at Moniaive.

Of tripod pots of brass there are four in the National collection. Three of these are of the ordinary type with two ears for the bow-shaped handle, while the fourth has a long, straight handle springing from one side. The largest pot is 14 inches in height by 11 inches across the mouth. It was found in the parish of Langholm. The smallest pot is seven inches high by $5\frac{1}{2}$ inches across the mouth, and was found about three feet below the surface of a meadow which had formerly been a moss, close to the Renalknowe, near Lochmaben. The third pot is 8 inches high by $6\frac{1}{2}$ across the mouth, and was found in Hunterhouse Moss, in the parish of Lochmaben. The long-handled pot, which stands 9 inches high by 6 inches across the mouth, with a nearly straight handle 6 inches long, was found lying beside it. These tripod ewers and pots are ordinary household utensils, and range in date from the fourteenth to the seventeenth century.

MEDAL.

There is also in the National Museum a silver medal of the Dumfriesshire Agricultural Society, which was presented to Robert Riddell of Glenriddell. It is $1\frac{5}{8}$ inch in diameter. The obverse has a figure of Ceres bearing a cornucopia on her left arm and holding out a wreath in her right, and standing in front of an agricultural landscape, with a plough, harrow, &c., at her feet. The inscription reads:—"SOCIETY FOR ENCOURAGEMENT OF AGRICULTURE, &c.;" below, in small letters, is the engraver's name, "KIRK·FEC." In the exergue:—"INSTITUTED AT DUMFRIES MDCCLXXVI." The reverse has the following engraved inscription:—"PRESENTED TO ROBERT RIDDELL, ESQ^R OF GLENRIDDEL," surrounding a wreath of laurel, within which is the conclusion of the inscription, "*A Lover of Agriculture and the Fine Arts.*"

SEALS.

The steel matrix of the common seal of the Burgh of Dumfries was presented to the National Collection in 1839. It bears the figure of St. Michael, facing to the left, standing upon the dragon, and thrusting his spear into its mouth. The inscription reads:—"SIGILLUM·COMMUNE·BURGI·DE·DUMFRES. Laing describes¹ another seal of the Burgh of Dumfries, as follows:—"St Michael, armed with sword and shield, standing upon the vanquished dragon. At the sides a crescent and a star, s' COMMUNITATIS·BURGI·DE·DUMFRES." It is stated to have been taken from an "imperfect wax impression found among some old papers in the Town Clerk's office;" and is most probably of older date than the steel matrix in the National Museum.

A small circular pendent seal of silver, found in Dumfries in 1878, was deposited in the National Museum by the Lords Commissioners of the Treasury in 1882. It bears a stag's head, underneath a rabbit, and the legend, "S NICOLAI DE GALWAY."

There is also a small rude seal of brass, one inch in length, the circular face of which displays an acorn with stalk and leaves. It was found in Dumfriesshire, and presented to the Museum in 1862.

CHARM-STONE.

A small pebble, of greenish sandstone, of irregular shape, pierced with two holes, and inscribed apparently with the name

¹ *Ancient Scottish Seals*, Vol. 1, p. 209.

William II. Scott, was found in the ruins of an old cow-byre in Dumfriesshire, and is supposed to have been used as a charm for cattle diseases.

MISCELLANEOUS OBJECTS.

Other objects from Dumfriesshire, which it is unnecessary to mention in detail, are: (1) A spearhead of iron, 8 inches in length, found at Cluden Mill; (2) three old axe-heads of iron found at Lochmaben Castle; (3) a portion of chain mail, oxidised into a solid mass, found in a moss on the bank of the Kinnell Water, near Moffat, under four feet of compact black peat, and resting on the clay¹; (4) a key and padlock, from Lochmaben Castle, and a large iron key, found in 1819 in the wall of the old Church of Lochmaben, burned in 1598; and (5) a candlestick of iron, with a point for insertion into the wall, found in an old farm-house in Dumfriesshire, and said to have been used by King Robert the Bruce!

* * * For the loan of the illustrations to this paper, the Society is indebted to the Society of Antiquaries of Scotland.

VII.—*The Religious Beliefs of the Ancient Egyptians as to the Entities of the Human Body and their Destinies.* By JAMES A. S. GRANT, M.A., M.D., LL.D., of Cairo. (Abridged.)

In order to get at these we must read the Egyptian mind as to its ideas about the body, and the soul, and the spirit after death. This we can now do in a satisfactory manner from the inscriptions of the V. and VI. Dynasties.

At first the Egyptians believed that man was composed of a body and a double, which they called "Ka," and it was not till some time afterwards that they conceived the idea of an existence even less substantial than the "Ka," which itself was ethereal. This they considered the essence of the human nature, and would correspond to our soul in the popular signification of that term, and they pictured it by a kind of crane, or by a human-headed hawk, which they called "Ba." Each soul had different faculties or qualities, and did not subsist but in the midst of surroundings compatible with those qualities. The "Ba" could quit the tomb

¹ *There is another portion of this chain-mail in the Grierson Museum, Thornhill.*

when it chose to do so, and take its flight to the other world, where it joined the cortege of the god of light and never returned again to this world. It was not, however, yet free from trials, so that it had to be instructed with all human wisdom, and furnished with all the talismans necessary for surmounting supernatural dangers. It had also to repeat the prayers and formulæ of the Book of the Dead in order to obtain access to the various mansions of the blest that had to be entered by their distinctive doors, which were guarded by special deities.

The Egyptian conception of the "Ba" did not in the least affect their continuing to believe in the existence of the "Ka." The "Ka" or double continued to dwell in Egypt, or more particularly where it used to reside when still in the body, and made the tomb its retreat, where it ate, and drank, and rested, in the Sahn or in portrait statues provided for it. Walls and doors formed no obstacle to its movements; but as it was not furnished with wings, like the "Ba," it could not fly from this world, and so had to be content to remain upon the earth. In the exoteric teaching of the Egyptian priests concerning the "Ba" and the "Ka," we can, without much difficulty, recognise that they had some conception of the properties of the world of the fourth dimension, the inhabitants of which are all mixed up and yet distinct, and where neither space nor material obstacles form any impediment to their movements that are flashed through space as quick as thought. The Egyptian mind conceived the idea of the human body having a "Ka" and a "Ba" that occupied it, and we may judge from the fact that the ancient Egyptians believed that the "Ba" alone went to another world; the "Ka," or spiritual body, was considered a mere earthly appendage that continued to dwell on the earth after its separation from the body. The "Ka" was not considered immortal, for it was subject to a second death which was a definite annihilation, and this death could be produced by the same means that caused the first death. It was subject to hunger, thirst, and fatigue; and was in constant danger of being killed by monstrous and venomous animals.

In the Book of the Dead there are prayers and formulæ addressed to serpents, scorpions, &c., to appease them and induce them not to do harm to the "Ka." The prayers of the survivors properly intoned had for effect to give food, a house, an equipage of domestics and guardians, who would assist the "Ka" and

protect it against its enemies. The moment the religious rites were accomplished and the prayers regularly and properly intoned the "Ka" became rich and happy in its surroundings; and the offerings of wine, fruit, and meat represented on the walls of the ante-chamber served to assuage thirst and allay hunger, and thus preserve the "Ka" from second death. The "Ka" was an ethereal intelligence incorporated into the human body so as to constitute its physical life and carry on its functions. When out of the body it continued to carry on the same functions in itself, and required spiritual nourishment to keep it alive. The "Ba," on the other hand, was transported to a new world to enjoy a future life in a different sphere, where the enjoyments were proportioned to the good or evil done during the terrestrial life, and suited to the capacity of the "Ba" to appreciate them.

Before knowing its lot the disembodied "Ba" had to appear before the tribunal of Osiris, who was assisted in coming to a proper judgment in each case by forty-two assessors. (Book of the Dead, chap. 125.)* The conscience or heart spoke for or against the "Ba" (Chap. 30), and an appeal was made to it by the "Ba" in these terms:—

"O, my heart! derived from my mother (nut), my heart! of the time when I was upon the earth; do not raise thyself against me, do not bring testimony as an enemy against me before the divine chiefs; do not abandon me before the great God (Osiris) Lord of the West (Amenti). All hail! to thee, heart of 'Osiris' that lives in the west; all hail to you divine Viscera; all hail! to you Gods with the plaited beard, powerful ones through your sceptre. Say only well of the dead, and grant that he may prosper through the medium of 'Nahb Kaon.'" (This strange divinity that unites the doubles or spiritual bodies is represented by a human-handed serpent.)

According to the testimony of the heart the "Ba" was condemned or absolved. Again, we see the actions of the "Ba" weighed in the infallible balance of justice and truth, and, according as they turn out to be heavy or light, as weighed against the symbol of justice and truth, so the judgment is given.

* The large scarabs are called heart-scarabs because they were placed in the position of the heart in the mummy and had part of the chapter "on the heart" from the "Book of the Dead" carved on them.

The condemned soul falls into hell, where it has for food and drink only filth, where scorpions and serpents pursue it till it ultimately succumbs to annihilation, after enduring a thousand tortures. The less guilty soul is put into a pig, or some other unclean animal, and driven back to the earth to go through another transmigration before appearing again in the presence of "Osiris." The justified soul after it had passed its judgment was not yet exempt from trials and dangers. Its knowledge had to be increased, and its powers enlarged. It was at liberty to assume all the forms it chose to adopt, as that of the golden hawk (chap. 77), that of the lotus (chap. 81), that of the phoenix (chap. 83), that of the crane (chap. 134), that of the swallow (chap. 86), or that of the viper (chap. 132). The assumption of all these forms was voluntary, and did not indicate the passage of the human soul into a beast's body. Each one of them was the symbol of the divinity; the entry of the soul, therefore, into them demonstrated only the assimilation of the soul to the divine type that it represented, but the evil one opposed it under a thousand hideous forms and endeavoured to destroy it, or at least to arrest its onward progress by his menaces and terrors. The evil principle is figured in chapters 31 and 32 of the Book of the Dead as a crocodile, and in chapter 36 as a tortoise, and in chapters 33, 35, 37, and 41 as serpents of various kinds.

In order to triumph over the wicked one the "Ba" had to identify itself with "Osiris," and receive the same help as "Osiris" receives from "Isis," "Nephtys," and the good gods. With their aid, and being able to pronounce the special formulæ, the "Ba" passed through the celestial mansions (chaps. 74, 75), and carried out in the fields of Ailoo or Elysium the ceremonies of mystic husbandry; after that, it mixed with the crowd of gods and joined with them in adorning the Sun (chaps. 110, 146). In order to merit this blessed destiny, the Egyptians had drawn up a code of practical morals, the different articles of which are found on the monuments of all periods; but the most complete version is to be found in the 125th chapter of the Book of the Dead. (The Book of the Dead, of which each mummy was supposed to have a copy, was a collection of prayers and formulæ for the use of the "Ba" in the other world). The "Ba," when brought before the tribunal of Osiris (who was the judge of the dead), pleaded its cause before "Osiris" and his assessors thus:—

“Homage to thee, Lord of truth and justice; homage to thee great God, Lord of truth and justice! I am come to thee, O my master! I present myself before thee to contemplate thy perfections; for I am acquainted with thee, I know thy name, and the names of the 42 divinities who are with thee in the hall of truth and justice. O, double spirit, Lord of truth and Lord of justice is thy name. I, even I, know you, Lords of truth and Justice. I have brought to you the truth.

I have put away lies.

I have not defrauded my fellowmen.

I have not stolen.

I have not oppressed the widow.

I have not treated any person with cruelty.

I have never perjured myself.

I have not allowed my mouth to tell any secrets.

I do not know what bad faith is.

I have shown no improper curiosity.

I have never done anything forbidden.

I have not caused the overseers of the labourers to exact more work than ought to be done.

I have not smitten men privily.

I have not been intoxicated.

I have not been negligent.

I have not been idle.

I have not been weary in well-doing.

I have done nothing abominable before the Gods.

I have not practised any shameful crime.

I have not falsely accused anyone.

I have not spoken evil either of the king or of my father.

I have not slandered anyone.

I have not left anyone to starve.

I have not caused anyone to weep.

I have not calumniated the slave to his master.

I have not committed murder.

I have not caused the death of anyone through treachery.

I have not diverted the offerings from the temple.

I have not taken away the provisions nor the bandages of the dead.

I have not let envy gnaw my heart.

I have not made fraudulent gains.

I have not altered the grain measures.

I have not shortened the palm by a finger.
 I have not removed any neighbour's landmarks.
 I have not falsified the balance.
 I have not deprived sucklings of their milk.
 I have not hunted the sacred animals on their feeding grounds.
 I have not snared the divine birds.
 I have not fished for the sacred fish in their lakes.
 I have not kept off the water in its season.
 I have not tapped a water canal on its passage.
 I have not extinguished the sacred fire when it ought to burn.
 I am pure! I am pure! I am pure!"

Another appeal to Osiris and his assessors is made in these words :

"Greeting to you, Gods who are in the hall of truth and justice ; who do not entertain a lie in your breast, but who live on truth at On (Heliopolis), and nourish your heart by means of it, in the presence of the Lord God who dwells in the disc of the sun. Deliver me from Typhon, who feeds on entrails ; O magistrates in this day of the great judgment, permit the dead to come to you—him who has not sinned, who has neither lied nor done evil, who has committed no crime, but has lived on truth and supported himself with justice ; who has spread joy around, and men speak of it, and the Gods rejoice in it ; who has given bread to the hungry, water to the thirsty, and clothing to the naked ; who has offered sacrifices to the Gods, and brought funeral meals to the dead. Deliver him from himself ; protect him against himself ; do not speak against him before the Lord of the dead, for his mouth is pure, and both his hands are pure."

We learn from these formulæ that the standard of morality with the ancient Egyptians was high. "Not one of the Christian virtues," writes M. Chabas, "is forgotten in the Egyptian code—piety, charity, gentleness, self-command in word and action, chastity, the protection of the weak, benevolence towards the needy, deference to superiors, respect for property in its minutest details, &c." From the above we gather that the Egyptians of the primeval monarchy had a clear conception of a natural body ("Sahon") and of a spiritual body ("Ka"), the latter being a faithful but ethereal reproduction of the former, and both separate and distinct from the soul ("Ba"). Thus far the Christian belief runs parallel with the Egyptian. The Egyptian, however, believed that it was only

the "Ba" or soul that went to heaven, while the "Ka" or double always remained on the earth and lived on the ethereal part of the offerings brought to it. The "Ka" was also constantly in danger of being annihilated by a second death.

VIII.—*Connection between Teutonic English and Greek.* By
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The object of this paper is to show the connection between Greek and English proper, as it existed before it came into contact with speakers and writers of the classical languages of Rome and Greece. In a former paper I made a list of between 400 and 500 words, cognate or akin in Latin and Teutonic English, and in this I give a similar list of between 300 and 400 words, having the same roots in Greek and English. The ancestors of both Greeks and English belonged to the same original stock, and spoke the same tongue. The Indo-European family of languages is divided into eight groups:—1, Indian Languages; 2, Iranian or Persian; 3, Hellenic or Greek; 4, Italic or Romanic; 5, Teutonic; 6, Celtic; 7, Slavonic; 8, Lettic. The Teutonic group is divided into three branches:—1, Low German; 2, High German; 3, Scandinavian. The English belongs to the Low German, and the modern German to the High German division. For the convenience of those unacquainted with Greek letters the words are printed in ordinary Roman type. Abbreviations:—L., Latin; A.S., Anglo-Saxon, or Old English.

Ache: ag-o; L., ago; A.S., acan.

Acre, acorn: agros; L., ager.

After: apo-tero.

Am = asm, of which *as* is the root, and *m* the first personal pronoun, seen in *me*; eimi = esmi; L., sum = esum.

And: anti; L., ante.

Angle (a hook): from which comes angler; ankos (a bend).

Ankle: ankōn (a bend).

Answer: A.S., and (against), swerian (to swear; and = anti).

Ape: kēpos or kēbos; Sans., kapi. The word has lost initial *k*, which is preserved in the Greek and Sanscrit.

Are: eisi = asanti; L., sunt = esunt.

Arm: armos (joint, shoulder).

Ass: onos; L., asinus.

- Awe : achos ; A.S., ege.
 Axe : axinē ; L., ascia. Compare oxys (sharp).
 Axle : axōn ; L., axis.
 Aye, ever : a(v)ei, ai(v)ōn ; L., ævum.
 Bakē : phogo, pepto.
 Bane : phonos (murder).
 Ban, banns : phaino, phanai ; L., fama.
 Be : phuo ; L., fui.
 Bear : phero ; L., fero.
 Beech : phēgos ; L., fagus.
 Bid : peitho (root pith).
 Bier : pheretrōn ; L., feretrum.
 Bleat : bleche, blecha-omai.
 Blink (original meaning, shine) : phlego.
 Bloom : phloōs (bloom), phullon (leaf).
 Book (original meaning, beech), phegos. The first books were
 writings scratched on beechen boards.
 Boom (hum) : bombos (humming) ; L., bombus.
 Bottom : puthmen ; L., fundus.
 Bough (original meaning, arm) : pechys (fore-arm).
 Bourn, burn (stream) : phrear (well) ; A.S., burna (well, fountain).
 Bow : pheugo ; L., fugo.
 Break : rheg-numi (root, frag) ; L., frango.
 Brother : phrater (a member of a brotherhood or clan). Its
 political meaning in Greek is peculiar. L., frater.
 Brow : o-phrys ; Sansc., bhru.
 Burgh, bury : purgos, pergamos.
 Burn, to : pyr.
 By : amphi. phi was the old termination of the oblique cases, so
 often seen in Homer.
 Call : kaleo ; L., calo.
 Chap, chop : kopto.
 Chin : genys ; L., gena.
 Choose : geuo ; L., gusto.
 Clack : klazo.
 Cleave : glypho.
 Clew, clue : klotho ; L., glomus.
 Cock (so called from its cry) : compare kokku (the cry of the
 cuckoo), used as an exclamation by Aristophanes.
 Come : baino = gwaino ; L., venio = gwenio

- Cow : bous (stem, bov) ; L., bos (bov).
- Crab : karabos (beetle) ; L., scarabaeus.
- Crane : geranos.
- Cuckoo : kokkyx ; L., cuculus.
- Damp, deaf : typhos (vapour).
- Dare : tharseo, tharsos.
- Daughter : thugater ; Sansc., dukitri (milk).
- Deck, thatch : tegos, stegos (roof), stego (to cover) ; L., tego.
- Deer : ther ; L., fera.
- Dike : teichos (wall).
- Do : tithemi (root, the) ; German, thun. The original meaning is put.
- Doom : themis (law).
- Door : thura ; L., fores.
- Dough : thingano (root, thigh) ; L., tango ; Germ., teig.
- Doze, dormouse : darthano ; L., dormio.
- Drake (contraction of enedrake, a male ened, A.S. for duck) : netta ; L., anas ; Germ., ente.
- Drone (hum) : threnos (dirge).
- Drone (non-working bee) : thronax. So called from the hum it makes.
- Ear : ous or aus ; L., auris.
- Ear (verb) : arōo ; L., aro.
- Earth : era (found in adverb eraze, to earth).
- East : eos (dawn) ; L., aurora.
- Eat : edo, esthio ; L., edo.
- Edge : akis (akid) ; L., acies.
- Eel : echis (snake), enchelys (eel) ; L., anguis.
- Egg : o(v)ou ; L., ovum.
- Eight : octo ; L., octo.
- Elk : alke ; L., alces.
- El, elbow : olene ; L., ulna.
- Else : allos ; L., alius.
- Ember (days) : amphi ; L., ambi.
- End : anti ; L., ante.
- Ewe : o(v)is ; L., ovis, A. S., eowu.
- Eye : old Greek okos ; L., oculus (diminutive of oculus) ; A.S., eage.
- Fall : sphallo ; L., fallo ; Sansc., sphal. The initial s is lost in Latin and the Teutonic languages.
- Fallow (reddish) : polios ; L., pallidus.

- Far : peran, para.
 Fare : perao, poreuomai ; L., experior.
 Farrow : porkos (pig) ; L., porcus.
 Fast (firm) : empedos ; phakelos (bundle).
 Father : pater ; L., pater.
 Fathom : the A.S. faethm meant the space reached by the out-
 stretched arms. petannumi ; L., pateo.
 Feather : petomai (fly) ; L., penna=petna.
 Fell (skin) ; pella ; L., pellis.
 Felt : pilos ; L., pileus.
 Fetter : pede ; L., pedica.
 Few : pauros ; L., paucus.
 Fill, full, folk : pleos, polus, pimplemi ; L., plenus, populus = polpulus.
 Finch : spiza, spingos. In some parts of England it is called spink.
 Fire : pyr.
 Firth, ford : porthmos ; L., portus.
 Fist : pygme ; L., pugnus ; A.S., fyst.
 Five : pente ; L., quinque ; A.S., fif=finf.
 Flat : platus ; L., planus—platnus.
 Flax, fold : pleko (weave).
 Flint : plinthos (brick).
 Flow, flood, float : pleo.
 Foal : polos ; L., pullus.
 Foot : pous (pod) ; L., pes (ped).
 For, fore : pro ; L., pro.
 For (prefix), as in forswear : para (in the sense of amiss).
 Four : tessares, pisures ; L., quatuor, A.S. feower.
 Further : proteros.
 Gall (bile) : chole ; L. fel.
 Get : chandano (root, chad) ; L., prehendo (root, hed).
 Gleam : chliaros (warm).
 Gold : chrysos.
 Goose : chen ; L., (h)anser ; goose=gons or gans ; Germ., gans.
 Gander is the masculine form of gans. The d is excrescent ; the
 masculine form being gan-ra in A.S.
 Grave : grapho ; L., scribo.
 Gray : graios ; L., ravus.
 Green : chloros ; chloe (young verdure).
 Grind : chrio ; L., frio.
 Grunt : gruzo ; gru (pig's grunt).

- Hail : chalaza.
 Hair : kara (head).
 Hale, whole : kalos (beautiful).
 Hall : kalia (hut).
 Halt : cholos.
 Hamper : kōphos (blunt).
 Hang : oknos (delay) ; L., cunctor.
 Hart, horn : keras ; L., cervus, cornu.
 Harvest : karpos ; L., carpo.
 Haulm, halm : kalamos ; L., culmus, calamus.
 He : ekeinos (root ki).
 Head : kephale ; L., caput.
 Heart : kardia ; L., cor (cord).
 Heel : lax ; L., calx.
 Heifer : from A.S., heahfore (a full grown cow) ; heah=high, full fore, cognate with the Greek poris (heifer).
 Hide (verb), hut : keutho.
 Hide (noun) : kutos, skutos ; L., cutis.
 Hie : kio, kineo ; L., cieo.
 Hip, hump : kuphos (hump), kupto (bend).
 Hive : kupē (hollow), kupellon (cup).
 Home : kome (village) ; keimai (lie).
 Hone : kōnos (peak).
 Hood : kotule (hollow).
 Hook : kuklos.
 Hound : kuōn (kun) ; L., canis.
 Howl : ololuzo.
 Hurdle : kartalos ; L., crates.
 Hundred : hekaton ; L., centum.
 I : ego ; L., ego ; A.S., ic.
 In : en ; L., in.
 Is : esti ; L., est.
 Kidney : kid is a corruption of A.S. cwith (belly), cognate with Greek gaster ; ney is a corruption of Scandinavian nere (kidney), cognate with Greek nephros (kidney).
 Kin, kind : genos, gig(e)nomai ; L., genus.
 Knee : gonu ; L., genu.
 Know : gignosko (root gno) ; L., (g)nosco.
 Lag : lagaros (slack) ; L., laxis.
 Lap, lip : lapto ; L., lambo.

- Lay, lie : lego, lechos (bed) ; L., lego.
 Leaf : lepos (scale).
 Lean : klino ; L., inclino.
 Lend, loan : leipo ; L., linquo.
 Lick : leicho ; L., lingo.
 Lift (steal) : klepto ; L., clepo.
 Light (adj.) : elachys (small) ; L., levis.
 Light (noun) : leukos (white), lychnos (light) ; L., lux (luc).
 Listen : kluo ; L., cluo.
 Lose, loose : luo ; L., luo.
 Loud : klutos ; L., in-clutus.
 Love, lief : liptomai ; L., libet, lubet.
 Lye : louo ; L., lavo.
 Mane : mannos (necklace) ; L., monile.
 May, might : megas, mechanē ; L., magnus.
 Me : me ; L., me.
 Mead : methu.
 Meal : mule ; L., mola, molo.
 Meat : massaomai (chew) ; L., mando.
 Meed : misthos (pay).
 Mellow : malakos ; L., mollis.
 Mete : metron ; L., metior.
 Mickle : megale.
 Mid : mesos ; L., medius.
 Mild : meilichos.
 Milk ; amelgo ; L., mulgeo.
 Mind : menos, mimnesko ; L., mens (ment).
 Mist : o-michle.
 Mix : misgo, mignumi ; L., misceo.
 Mood (disposition) : memaa (I strive after) ; A.S., mod (mind).
 Moon, month : men ; L., mensis.
 Most : megistos ; A.S., mœst.
 Mother : meter ; L., mater.
 Mourn : muro.
 Mouse : mus ; L., mus.
 Mow : a-ma-o ; L., meto.
 Mum : mu ; L., mu.
 Murder : mortos or brotos (mortal) ; L., mors (mort)
 Nail : onyx (onych) ; L., unguis ; A.S., nægel.
 Name : o-noma ; L., nomen.

- Navel: omphalos (in which initial n is lost).
 Ne in not: me; L., ne.
 Needle: neo (I spin); L., neo (sew).
 Nest: naio = nasio (dwell), nostos (a return home); L., nidus = nisdus.
 New: neos; L., novus.
 Night: nyx (nykt); L., nox (noct).
 Nine = nigen: enne(v)a; L., novem.
 Now: nun; L., nunc.
 Oar, row: eretes; eretmos; L., remus.
 Oast (kiln for drying hops): aithos (burning heat).
 Oats: oidos (swelling).
 Of, off: apo; L., ab; in A.S. often spelt af.
 Oft: hypatos. This is a superlative form connected with the comparative hyper. Oft is in like manner the superlative corresponding to the comparative over.
 On: ano.
 One: oios = oinos; L., unus.
 Otter (allied to water): hydra.
 Over: hyper; L., super.
 Path: patos.
 Pipe: pipizo (chirp); L., pipio.
 Poll: coruphe (top).
 Queen: gune.
 Quern, kern: guris (fine meal).
 Quick: bios (root biv); L., vivus; Sans., giv (to live).
 Rain: brecho; A.S., regen; L., rigo.
 Rattle: kroteo.
 Raw: kruos; L., crudus.
 Reach, right: o-rego (stretch); L., rectus.
 Red: erythros; A.S., rud; L., ruber.
 Rest: eroe.
 Riddle (sieve): kradao (shake).
 Rime (incorrectly spelt rhyme): a-rithmos.
 Rime (hoar-frost): krymos, kryos.
 Ring: krikos, kirkos; L., circus.
 Root, wort: rhiza; L., radix.
 Sallow (willow): helike; L., salix.
 Salt: hals; L., sal.
 Same: hama, homos, syn; L., simul, similis.

- Sap : opos ; L., sucus.
 Scatter : skedannumi.
 Seven : hepta ; L., septem.
 Sew : kas-suo (stitch) ; L., suo.
 Shade : skotos (darkness).
 Sharp : skorpios, glapho (carve) ; L., scalpo.
 Shave : skapto (dig) ; L., scabo (scratch).
 She : he.
 Shear, short : keiro.
 Shop ; skepas (cover).
 Sit, seat : hedos, hezomai ; L., sedeo.
 Six : hex ; L., sex.
 Skew : skaios (left hand).
 Sky : skutos (covering) ; A.S., scua (shade).
 Slime : sialon (spital) ; L., saliva.
 Small : smikros.
 Smear : smao.
 Smile : meidao ; L., miror.
 Snare (originally a string) : narke (cramp), neuron (sinew) ; L.,
 nervus.
 Snow : nipha ; L., nix (niv).
 So : ho ; L., su-us, sic.
 Son : huios = suios.
 Sow : hus, sus ; L., sus.
 Spade : spathe ; L., spatha.
 Spare : sparnos (rare).
 Spark : spharagos (crackling).
 Spew, spue : ptuo ; L., spuio.
 Spin : spao (draw out).
 Stair ; steicho (mount).
 Stalk : stelechos (stem), steleon (handle).
 Stand : histemi (root sta) ; L., sto (root sta).
 Star : aster ; L., stella = sterula.
 Stark : stereos (stiff).
 Steal : stello (put away).
 Steer (young ox) : tauros (stauros) ; L., taurus.
 Step : steibo (tread).
 Stick, sting : stizo, stigma ; L., instigo.
 Stone : stia (found in Apollonius and Galen).
 Stool (literally that which stands firm) : stele (pillar).

- Stork : *torgos* (large bird), found in *Lycophon*.
- Straw, strew : *stornumi* ; *L.*, *sterno* (*stra*).
- Stream : *rheo*.
- String, strong : *strangos* (tightly twisted).
- Stub : *stupos* (*stem*).
- Stun (originally to make a loud noise) : *steno* (*groan*).
- Swamp : *somphos* (*spongy*).
- Swarm (literally that which hums) : *surrizo* ; *L.*, *susurrus*.
- Sweat : *hidros* (root *svid*) ; *L.*, *sudo*.
- Sweet : *hedys*, *handano* (root *had* or *vad*) ; *L.*, *suavis*.
- Take : *tetagon* (*taking*), *thingano* (root *thig*) ; *L.*, *tango* (root *tag*).
- Tame : *damao* ; *L.*, *domo*.
- Tear (noun) : *dakru* ; *L.*, *lacrima*.
- Tear (verb) : *dero* (*flay*).
- Ten : *deka* ; *L.*, *decem*.
- Thane : *teknon* (*child*) ; *A.S.*, *thigen*.
- That : *to* ; *L.*, *is-te*, *is-ta*, *is-tud*.
- Thatch : *tegos*, *stegos*.
- Thaw : *teko* (*melt*).
- Ther (in either, neither, other, whether) : same termination as *teros* in *poteros*.
- Thin : *tanaos* ; *L.*, *tenuis*.
- Third = *thrid* : *tritos* ; *L.*, *tertius*.
- Thirst : *tersomai* (*become dry*).
- Thole : *tolmao*, *tlaio* ; *L.*, *tollo*.
- Thou : *su*, *tu* ; *L.*, *tu*.
- Three : *treis*, *tria* ; *L.*, *tres*, *tria*.
- Throw : *trepo*, *tropos* ; *L.*, *torqueo*.
- Thrum : *terma* (*end*) ; *L.*, *terminus*.
- Thump : *tupto*, *tumpanon*.
- Tide, time : *daiomai* (*assign*).
- Timber : *demo* (*build*), *domos* (*house*)
- Toe : *daktylos* ; *L.*, *digitus* ; *A.S.*, *ta* (*contraction of tahe*).
- Token : *deiknumi* ; *L.*, *dico*.
- Tooth : *odous* (*odont*) ; *L.*, *dens* (*dent*) ; *A.S.*, *toth* = *tonth*.
- Tuesday : *Zeus* ; *L.*, *Ju(piter)* ; *A.S.*, *Tiw* (*god of war*).
- Twice : *di* ; *L.*, *bi* ; are cognate with *A.S.* *twi* (*double*).
- Two : *duo* ; *L.*, *duo*.
- Un (negative prefix) : *an* (*negative prefix*) ; *L.*, *in*.
- Un (verbal prefix) : *anti* ; *A.S.*, *and* (*seen in answer*).

Up: hypo ; L., sub.

Walk (original meaning, to roll) : eilo (root, velv) ; L., vergo.

Ware, wary : horao (see) ; L., vereor.

Water : hydor (hydart) ; L., unda.

Wax (verb) : auxo ; L., augeo.

Weak : eiko (yield, the root of which is vik).

Wed (literally to pledge) : aethlon = avethlon (prize) ; L., vas (vad).

Weigh, wagon : ochos (carriage), in which the aspirate takes the place of w.

Wer (wolf) : heros ; A.S., wer (man).

Whale : phalaina.

Whether : koteros, poteros ; L., uter = kuter.

Will : boulomai ; L., velle, volo.

Wit, wot : (v)idein, (v)oida ; L., video.

Withe : itea (willow, root, vit) ; L., vimen, vitis.

Wolf : lukos ; L., lupus.

Wool : (v)eros, (v)erion.

Word : eiro (speak, root ver) ; L., verbum.

Work : (v)ergon.

Yard ; chortos ; L., hortus (garden).

Yarn : chorde (cord).

Yawn : chaino (gape) ; L., hio.

Ye, you : humeis ; L., vos.

Yea, yes : hos (who).

Year : hora (season).

Yearn : chairo (rejoice).

Yeast : zeo (boil) ; zestos (boiling).

Yellow : chloe (young verdure), chole (bile) ; L., helvus (light yellow).

Yester(day) : chthes ; L., heri.

Yoke : zugon ; L., jugum.

Young : Ion (Ivon) ; L., juvenis.

REPORT ON THE HERBARIUM.

By Mr G. F. SCOTT-ELLIOT, F.R.Bot.Soc.,Edin.

During the last year we have to acknowledge valuable donations both from friends at a distance and from our own members and local correspondents ; amongst the former, Miss F. P. Thompson of Settle, Yorkshire, has presented us with a collection which is of the greatest importance. Members will find within it not only many rare and interesting plants, particularly of the limestones, not represented in our district, but also many specimens of great classical and antiquarian value gathered by Mr Tatham and Mr Backhouse, the fathers of Yorkshire botany. Mr Arnold Lees' "Botany of West Yorkshire," of which the Society possesses a copy, shows how thoroughly the Misses Thompson and their uncle and grandfather (the Messrs Tatham and Backhouse referred to) have studied the district, and the result of their combined labour is well worth the attention of our botanical members. There are also in it many difficult and critical species, exg. *Hieracia*, named by the best authority (Mr Backhouse), which will be of the greatest use to us in our labours hereafter.

The Rev. Mr Gunn, of Stichel, Kelso, has also sent us some mosses, partly named by himself, and which Mr M^r Andrew has been kind enough to name in a complete manner. In addition to this, Mr Gunn holds out the hope of allowing us to obtain duplicates of the willows and other plants of the late Mr Robertson's collection at Kelso. This collection is unique in value, and it is to be hoped that we shall be considered worthy of receiving it.

From members of our own fold I have also received many valuable donations, and the plants which I receive for naming show a gratifying tendency to increase in number and difficulty. I do not wish, however, to mention all the names of those who have assisted the Society, partly because virtue is its own reward, and partly because the season is not yet finished, and I do not wish to except any of our botanists from the thanks which are their due. It seems to me that our aim should be to have in Dumfries a collection which will permit anyone interested in the subject to name with absolute certainty any plant gathered in the district. Hitherto it has seemed to me a disgrace to Scottish

science that any doubtful and peculiar forms should have to be forwarded to England for comparison with private herbaria there. Our collection is now in such a forward condition that any ordinary forms, and many critical varieties, can be named by members for themselves without resorting to English correspondents, and it is quite within the power of the Society to take for the Southern Scottish Counties the position occupied by Mr Bennett of Croydon for the British Flora as a whole. All that is required for this end is that members should collect large quantities of such doubtful forms as *Ranunculus aquatilis*, *Rubus*, *Galices*, *Hieracia* and compare them with the collection at present existing to detect the rarities not represented. I shall be, of course, most happy to name any sent to me, and particularly any in the early part of the Flora to the end of Leguminosæ inclusive. There is an unfortunate tendency in British Botany to multiply names without any sufficient reason, and this can only be kept in check by having the largest possible series of forms to work with. I must, therefore, beg our local members to gather and press as many forms as they can, and to make also careful notes of the localities and circumstances under which they found the plants.

In fact the great want of our herbarium is at present students. I am constantly asked to recommend an easy book on botany, but by far the easiest book, and the one which is incapable of an untruth, is the herbarium. A few minutes occupied in turning over the leaves are worth many hours occupied in studying books on botany. Hence, during the winter, I strongly recommend all our scientific members to pay frequent visits to the collection, and learn the living plants themselves.

The Society has again to thank the Misses Hannay for the excellent condition of the specimens, and for the peculiarly neat and careful way in which every plant is mounted. No one who has not tried it can appreciate the labour and care which the Misses Hannay have spent on this work, and the Society is very deeply indebted to them.

The thanks of the Society are due to Mr Bennett of Croydon, for the donation of a set of East Anglian specimens.

30th September, 1892.

FIELD MEETINGS.

Saturday, 4th of June.

Leaving Dumfries with the 8.55 morning train, the members arrived at Newton-Stewart, on the banks of the Cree, shortly after eleven o'clock, and set immediately to work, under the guidance of Sergeant M·Millan, a local antiquary. Among those who swelled the contingent at Newton-Stewart, beside Mr M·Millan, were— Sheriff Watson, the Rev. W. Reid, parish minister of Minigaff; Mr Mackie, rector of Wigtown Grammar School; and Mr and Miss St Clair, of the Ewart Institute.

Crossing the Cree into the Stewartry of Kirkeudbright, the members of the Society next passed through the small rustic town of Minnigaff, which looks like a suburb of Newton-Stewart, but is in reality a much older town. Here our guide directed attention to a worn stone, like a whinstone boulder, at the centre of the village, which bore traces of an old dial plate carved on the upper surface. Unfortunately, the custom of lighting a bon-fire around it on New-Year's morning had split the stone. A watch was also displayed, made in Newton-Douglas, 1772, that being then the name of the town, so called in honour of Mr W. Douglas, an enterprising merchant, proprietor of the village of Carlinwark, the name of which was changed to Castle-Douglas. The name Newton-Stewart was, however, afterwards reverted to when Mr Douglas's carpet manufactory proved a failure. The church and manse of Minnigaff stand in the peninsula formed by the junction of the Penkill burn with the Cree. Evidently these important buildings are not conveniently situated for the bulk of the parishioners, but are in a corner of the parish, and not far from the neighbouring Parish Church of Penninghame. The avenue towards the manse was glowing with rhododendrons, and no grass could be greener than that in the lawns around. The party next ascended the Court Moat, close to the church, near the verge of the peninsula. No finer view could be had in the South of Scotland than the view from this. The Cree and the Penkill were seen on either side winding underneath overhanging trees, many

of them in blossom, and all of them clothed with freshest foliage. The large sawmills of the Messrs Callender were at our feet. The air was impregnated with "Sabean odours as from the spicy shores of Araby the Blest." Every thick bush held its blackbird, and on a few of the higher trees were perched thrushes mingling their melody with that of lesser songsters, as the hedge sparrow and chaffinch. The colour of the streams suggested angling at an advantage. The churchyard of Minnigaff was next inspected. It contains many interesting monuments. The oldest was a small triangular stone, bearing that it was in remembrance of A. Murray, 1416. There was a surmise that the lettering was more modern than the date. Another gravestone bearing appropriate sculpture was over the grave of J. M^cCallum, master of the foxhounds. A most pretentious monument was over the grave of Patrick Heron. The sculpture showed two herons opposite each other, and reminded one of the totems of the tribes of America or Australia, who fancy themselves descended from animals, and sometimes from plants, which consequently they adore, and stitch into their dresses on court occasions. Another, but a very modest gravestone, was a big slate-stone, erected over the grave of Patrick M^cCaa, waulker (of cloth), 1653. The letters were rude and straggled over the stone, but were kept legible by the finger-nails of the careful local antiquarian. We next approached the two gable-walls, ivy-covered, of the old parish church. It is more than half-a-century since worship was conducted in it, and it now contains several graves in the interior. But there are preserved within the walls a very fine Maltese cross, granite, erected on an ornamental pedestal, and of unknown date. It has been surmised that it was in honour of the four Evangelists, and certainly a human figure is sculptured on one of its sides. A cross of ruder form and older date was excavated out of the walls of this old church, and is now to be seen beside the other. A sculptured slab over the grave of an ecclesiastic, inserted in the church wall, has been removed. We only hope that it is somewhere in careful keeping. Crossing to the modern church, one of the party discovered a fine plant of *Chelidonium majus* in full bloom. There was also a yew tree, estimated to be at least eight hundred years old.

Leaving the church and churchyard, the party next proceeded to Kirroughtree, a house and estate belonging to cadets of the

great Maxwell family, but now in the possession of Mr Armitage. Mr M·Millan there pointed out the lid of a stone cist, an old quern, and an old canoe, got in the district, but so overgrown with moss that none save an antiquary's eye could have readily observed it. The hermitage was next inspected, being an octagonal house built of panels of bark. The noble beech trees around were objects of admiration; and to geologists the bank, which stretched far above a hundred yards, was evidence of one of our old raised sea-beaches, although the Solway now flows miles away.

The party now began to find its way back to Newton-Stewart, where Mr M·Millan's excellent collection of local antiquities was inspected. Stone-hammers, stone-knives, and other objects of prehistoric times were shown. Then came objects of bronze swords and daggers of the middle ages. The collection was rich in spinning wheels of antique shape. The stone spindle whorls, the distaff, and the flax were all displayed. The large shuttle of the last customer weaver and the smaller one of the last linen weaver in the district were shown. Besides these were excellent specimens of old furniture. The fine back of an old oak chair, saved from a conflagration, was most ingeniously wrought in as the frame of a mirror, and occupied a place of honour above the mantelpiece. We hope Mr M·Millan will succeed to add to his collection that dreadful instrument of warfare, the Galloway flail. Dr Grierson, of Thornhill, after long search, was fortunate to secure a specimen previous to his death. We fancy Mr M·Millan must be a most useful man to a student of Galloway antiquities. His collection of Galloway literature also should not be passed over.

It was proposed by Dr Chinnock, and seconded by the Rev. Mr Andson, that Sergeant M·Millan be made an honorary member of the Dumfries Antiquarian Society.

Saturday, 3rd of September.

The party proceeded first by rail to Sanquhar, where they were met by Mr Wilson, of the Royal Bank, and Mr Brown, burgh assessor, and author of the excellent history of the town and district recently published, who kindly agreed to act as guide to the excursionists. The first place visited was the Parish Church and churchyard. The church is a handsome edifice, with square tower, built in 1827, and capable of accommodating upwards of 900 sitters.

It occupies the site of an older building, said to have been remarkable for its size and disproportion, and supposed, from some sculptured stones in its walls, now built into the churchyard wall, to have been of great antiquity. Three of these were examined, but no inscription on them was legible, to give an idea of their date. The bell is the same that was used in the ancient building, and was presented by one of the Dukes of Queensberry last century. The burial vaults of the Crichtons of Sanquhar Castle were underneath the floor of the old church, but are outside the modern one, at the east end of the building, from which it may probably be inferred that the former edifice, like many old churches, such as Anwoth, for example, was much longer and narrower than the one which now occupies its site. There are not many tombstones of much note. One of the most interesting is a flat stone in memory of Thomas Shiels, who was originally minister of Kirkbride, and ejected at the Restoration, but, surviving the times of persecution, became minister of Sanquhar after the Revolution, and continued in his charge until his death in 1708. Leaving the churchyard by a three-horse conveyance, the party proceeded to Crawick Village, prettily situated on the right bank of the stream, near its junction with the Nith, with its woollen factory, corn mill, and forge, the last said to have been in existence for 100 years, and one of the first in Scotland at which spades were manufactured. From this point the party proceeded on foot past the Holm, an old mansion house, once with the adjacent grounds the property of a Mr Macnab, but purchased from him by the Duke of Buccleuch, and now used as a shooting lodge by that nobleman. For some distance above this, walks have been formed on both sides of the stream, passing through wooded banks, between which the river rushes rapidly over a rocky bed, diversified by numerous cascades. This is a most romantic glen, not unlike that of the Dee above the bridge of Tongland, though on a smaller scale, and was greatly admired. Tradition reports that it was here that Lord Douglas placed his followers in ambush during the War of Independence, when he made a rapid march for the capture of Sanquhar Castle, which had fallen into the hands of the English (an object in which he was completely successful). It is worthy of note that old English coins of the time of the Edwards have been found in Crawick Water near its junction with the Nith. The party on leaving the glen found their conveyance waiting for

them at its head, and, crossing by a wooden bridge, continued their journey to Orchard farm; and from thence, by a grassy road which leads to some of the sheep farms of the district, walked up the side of a ravine, down which the Orchard Burn flows, until they came to a huge granite boulder at a considerable height in the bed of the stream, said to be upwards of twenty tons in weight, and crossed by a vein of white quartz, from which it derives its name of the "Belted Stane." As the prevailing rocks of the district are not granite but grey wacke or blue whinstone, it is supposed that this boulder must have been transported by glacial action from a more distant region. Farther up the valley, however, there is a limited area in which red granite resembling that of Peterhead is found, and a specimen of this was picked up at a subsequent stage of the journey. Returning to the road at Orchard farm, attention was called to a standing stone in a neighbouring field, about three feet high, and square in form, sometimes called the font stone, because of two cup-like indentions in it, but the opinion of some of the party was that more probably it had formed the base of a cross. Higher up the valley, in a field on the farm of Corsebank, was another stone of similar size, and of different material from what is found in the district. The stone at Orchard farm was sandstone, but this was horn blende, and probably, like the "Belted Stane" before referred to, brought to the place by glacial action. But being sunk into the ground, as if erected by human hands, and not merely lying upon the surface, it may be inferred that it was intended to be a memorial of some past event—such as a battle—and such is the tradition of the district. It is said that it commemorates a fight between the people of Crawford and the people of Nithsdale, the boundary between Dumfriesshire and Lanarkshire being little more than a mile distant. The upper part of the valley of the Crawick is comparatively narrow, and bounded on either side by smooth green hills, mostly very steep, but clothed with grass to the top, and not unlike the hills in the pass of Dalveen. One peculiarity of these hills is that along the bottom of them run a series of projections, resembling buttresses, which have been formed by landslips occurring from time to time, and give them an exceedingly picturesque appearance. The journey was continued a little beyond the junction of the Spannoch with the Crawick, near which the Wanlock also unites its waters with that stream. The most

notable object here is the hill of Craignorth, remarkable for its steepness. It seemed almost perpendicular, yet sheep were seen feeding upon its sides.

In the course of the day a meeting of the Society was held, at which Sir James Crichton Browne, Mr Brown of Sanquhar (author of the History), Mr Scott of Kirkbank, and Dr Lorraine of Dumfries, were proposed as members, and unanimously admitted. After the return to Sanquhar, on the motion of Mr Neilson, seconded by Mr M·Kettrick, a very hearty vote of thanks was accorded to Mr Wilson and Mr Brown for their valuable services as guides to the party, to which these gentlemen replied in suitable terms.

FLORA OF DUMFRIESSHIRE

AND

DUMFRIES DISTRICT.

PART II.—TO THE END OF RHAMNACE, &C.

EDITED BY

G. F. SCOTT-ELLIOT, M.A., B.Sc., F.L.S., F.R.Bot.Soc.Edin.

ASSISTED BY

J. M'ANDREW, J. T. JOHNSTONE, and other Botanists.

ENTOMOLOGY BY

Mr R. SERVICE and Mr E. BRUNETTI.

P R E F A C E.

The present instalment of the Flora differs in some details from that already issued. Thus I have only in a few cases quoted the records of plants from the surrounding counties, and only when such records are of interest.

I have also omitted the lists of insect-visitors given by Müller and other observers, as it seems to me better to defer such a bibliography of insect visitors till the end of the Flora, always supposing that such a consummation may be eventually attained. I have to thank Miss Hannay for assisting me in this part of the work, which is the most tedious and difficult part of it. All the insects whose names are given have been caught on the flowers mentioned either by Miss Hannay or myself; and I have to express my thanks to Mr Robert Service for naming all the Hymenoptera as well as many of the Diptera, and to Mr E. Brunetti for revising and naming all the Dipterous collection. Unfortunately I was unable this year to return sufficiently early to Dumfriesshire for observation of the violets, wood anemone, and other forms, but the gaps will, I hope, be filled up at some future time.

I have again to thank my numerous indefatigable correspondents throughout Dumfriesshire and Kirkcudbright for their kind

assistance this year, and in addition to those already mentioned in my former list, the following have rendered me valuable assistance this summer :—

Mr G. Bell, Caledonian Place, Lockerbie	... cited as <i>G.Bl.</i>
Mr J. H. Dixon, Dabton, Thornhill „ <i>J.H.Dx.</i>
Mr R. Doughty, Byreburn, Canobie „ <i>R.Do.</i>
Mr A. B. Hall, Thirsk „ <i>A.B.H.</i>
Mrs Stewart, Shambellie „ <i>Stw.</i>
Miss Wedderburn, Glenlair (Herbarium) „ <i>Wd.Herb.</i>
Miss J. Wilson and R. Bell, Esq. (Catalogue of Upper Eskdale Plants)	... cited as <i>J.Wl.</i> and <i>R.Bl.</i>

I have also to thank Dr Wilson, curator of the Edinburgh Herbarium, for kindly looking in the collection for localities from the three counties, and through his assistance I have obtained records of the work of the following, whose names are new to the Flora: Messrs T. B. Bell (*T.B.Bl.*), J. A. Brown (*J.A.Br.*), G. Horn (*G.Ho.*), Mr Craig Christie (*C.C.*), and Mr Maughan (*Mau.*)

I have also found a few plants gathered by Mr Ridley (*S.O.R.*) in the British Museum Herbarium.

A new feature of the Flora is the dates on which plants were first noticed, and for which I am entirely indebted to Mr J. T. Johnstone.

Members of the Society will, I am afraid, notice that there is a great want of definiteness in the notes on altitude and habitat, but this is due to want of information, which I hope to remedy in time.

It will also be seen from the text that the Flora is really the work of those who have and are now kindly assisting me. Mr A. Bennett has very kindly looked over most of the critical species for me.

November 12, 1892.

***Reseda luteola* L.** (Dyer's Weed, Mignonette).

Record. Dfs.—By the Nith ab. Dr Burgess, 1789; *Kcd.*—Creetown, J. M'Andrew, 1882.

Also found at Ecclefechan (Exc. 82).

Helianthemum vulgare Gaert. (Rockrose).

Records. *Dfs.*—J. Wilson, Excursion of Society, 1882; *Kcd.*—Rev. J. Fraser, 1863; *Wgt.*—Arnott, 1848.

Localities. C. along the Kirkcudbright Coast, Glenlair, *Wd. Herb. Nithsdale*—Lochanhead, *F. W. G.*; Littleknowe, Glen, *Th., C.E.M.*; Grove Hills, *S.E.*; Craigneston 500 ft., Barddenoch 650 ft., *J. Cr.*; Dalveen, *Exc.*; Spango Bridge, *Dv.*; Beeftub, Spout Craig, Corehead, burn between Crofthead and Selcoth, *J.T.J.* (a peculiar and anomalous distribution).

On granite, whinstone, or boulder clay soils with a dry sunny southern exposure, in windy or part-sheltered places.

Visitors. *Melanostoma mellina*, *Cynomyia mortuorum*, *Platychirius clypeatus*, *Lucilia Cesar*, *Rhamphomyia*, *Dolichopods*, *Chortophila*, and five unnamed species.

Viola palustris L. (Marsh Violet).

Records. *Dfs.*—J. Cruickshank, 1836; *Kcd.*—P. Gray, 1844; *Wgt.*—J. M'Andrew, 1882.

Localities. *Nithsdale*—Lincluden, *P.Gr.*; Newton, Locharmoss, *S.E.*; Cowhill, *Ad. and S.D.J.*; Twomerkland (a white variety), *J. Cr.*; Sanquhar, *Dv.* *Annandale*—Elsieshiels, *S.E.*; Millhill; Eskrigg, *G. Bl.*; Echo Tower; Dumcrieff; Moffat, *J.T.J.* *Eskdale*—Solway Moss, *E. Ty.*

Wet or moist places; peaty, alluvial, or humoid loam; exposed to sun; partly sheltered by grass or ditch sides, &c. Appears May 4 to 12, *J.T.J.*

Viola cornuta L.

Record. *Dfs.*—Railway Station, Miss Hannay, 1892 (Railway Passenger).

Viola odorata L. (Garden Violet).

Record. *Dfs. and Kcd.*—P. Gray, 1850; *Wgt.*—J. M'Andrew, 1890.

Localities. *Nithsdale*—Netherwood, Nunbank, Glencaple Road, *C.E.M.*; New Quay, *P.Gr.*; Lincluden, Nunholm, *Hn.*; Clarencefield, *Th.*

An escape establishing itself in moist, shady, and sheltered places on leafmould.

Viola hirta L.

Record. *Kcd.*—Arnott, 1848.

Locality. Confirmed on Criffel, A. B. Hall, 1891.

Viola Lactea Sm.

Record. *Dfs.*—Howleugh Road, Rev. W. Bennet??

Viola Canina L. (Dog Violet).

167 *Sylvatica Fr. Var. a. Records.* *Dfs.*—J. Cruickshank, 1836;

Kcd.—P. Gray, 1850; *Wgt.*—G. C. Druce, 1883.

Var. b. flavicornis Smith. *Dfs.*—Miss Milligan, 1892.

Nos. 168, 169, 170, apparently absent.

Localities. *Nithsdale*—C., near Dumfries, *P.Gr.*, *F.W.G.*, Park Road, *var. b.*, *C.E.M.*, Troqueer *Hu.*, Moniaive, *J. Cr.*, Sanquhar, *Dv.* *Annandale*—Water of *Æ*, *var. b.*, *S.E.*, c to 300 ft. Milke, Kirtle, *G. Bl.*, to 1300 ft. Beeftub, and 2300 ft. Midlawburn and Whitecombe, *var. a. and b.*, *J.T.J.*, *S.E. Eskdale*—v.c. to 500 ft. *S.E.*, Castle O'er *J.Wl.* and *R.Bl.*

Prefers dry rather than moist leafmould, roadsides, and other soils; sunny slopes; usually in part wind-sheltered. Becomes white in shady moist places. Appears April 14 to 28, *J.T.J.* *Var. b.* prefers ground free of other plants, short grass, steep banks, &c.

Viola tricolor L. (Pansy).

173. *Eutricolor.* *Record.* *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—J. M^cAndrew, 1890.

174. *Arvensis.* *Dfs.*—Dr F. W. Grierson, 1882.

175. *Curtisii.* *Dfs.*—G. F. Scott-Elliot, 1892.

176. *Lutea var. a.* *Dfs.*—W. Stevens, 1848; *Kcd.*—P. Gray, 1850; *Wgt.*—G. C. Druce, 1883.

Var. b. amoena. *Dfs.*—Sadler, 1854; *Kcd.*—F. R. Coles, 1882.

Localities. *Nithsdale*—v.c. near Dumfries (173, 174, 176), *P.Gr.*, *C.E.M.*, *F.W.G.*; Racks, 174 *S.E.*; Cowhill, 176 *Ad.* and *S.D.J.*; reaching 1200 ft. Moniaive, *J.Cr.*; Sanquhar (173, 174), *Dv.*, Wanlockhead 176, *W.St.*, *Dr Gl.*, *F.W.G.*; *Annandale*—v.c. Newbie, *S.E.*; *Æ* Water 175, *S.E.*; Dryfe, Milke *G.Bl.*; Beattock 174 *J.T.J.*; Auchencas 174, Penbreck 176. *S.E.*; Garpel 176, Beeftub and Grey Mare's Tail 176, *var. b.*, *J.Sd.*, *J.T.J.* Loch Skene 2000 ft. *S.E.* *Eskdale*—c. Canobie *E.Ty.*, Wauchope 176 *var. b.* *S.E.*, Castle O'er (173, 176) *J.Wl.* and *R.Bl.*

The *preferences* of these forms seem to be:—173 for pretty dry leafmould, roadsides, &c., partly shaded and wind-sheltered, and usually below 500 feet; 174 distinctly dry ground on railway cinders, waste roadsides with full exposure and below 500 ft.; 175 slightly moist *sandy* soil, bare of other plants, and fully exposed; 176 rather dry slopes on boulder clay or whinstone in full sun exposure, and only partly wind-sheltered by shortish grass, commonest above 500 ft.; 176 *var. b.* similar to last, but the least sheltered and sunniest spots, specially at highest altitudes. Appears April 5 till Sept. *J.T.J.*

Polygala Vulgaris L. (Milkwort).

177. *Euvulgaris*. *Record. Dfs.*—P. Gray, 1863; *Kcd.* and *Wgt.*—J. M^rAndrew, 1882 and 1892.
178. *Oxyptera*. *Kcd.*—J. M^rAndrew, 1890 (not typical, but not *vulgaris*.—*A. Bennet*).
179. *Serpyllacea*. *Dfs.*—P. Gray, 1845; *Kcd.*—F. R. Coles, 1883. *Localities.* *Nithsdale*—C. Kirkconnel, *M.W.*; Carnsalloch, *Hn.*; Moniaive, *J.Cr.*; Sanquhar, *Dr. Annandale*—V.C. Queensberry, 179, *P.Gr.*; Hindhill, *S.W.Ca.*; Hartfell, *J.T.J.*; Whitcoombe, 179, *S.E.* *Eskdale*—Solwaymoss and v.c., *E.Ty., S.E.*; Blochwell, *S.E.*; Castle O'er, *J.Wl. and R.Bl.*

Prefers dry but often marshy ground, chiefly on whinstone, boulderclay, or peat; in sun, rarely shaded; usually windy places, or partly sheltered by short grass or broken ground. (179 on specially dry, sunny, windy, and bare places.) Appears May 15 to June 7. *J.T.J.*

Dianthus armeria L. (Deptford Pink).

Record. Dfs.—Auldgirith, Messrs Fingland and Davidson, 1882; *Kcd.*—F. R. Coles, 1883 (railway passenger). Also, *Cumb.*

Silene inflata Sm. (Bladder Champion).

192. *Cucubalus*. *Record Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—J. M^rAndrew, 1882. *Var. b. puberula.* *Dfs.*—J. Sadler, 1857; *Kcd.*—J. M^rAndrew, 1882.
193. *Maritima*. *Dfs.*—P. Gray, 1844. *Kcd.* and *Wgt.*—J. M^rAndrew, 1882.
- Localities.* 193 c. on shore, Carlaverock, Powfoot, *M.J.H.*; Seafield to Redkirk, Old Gretna, &c., *S.E.* Also, inland at Grey Mare's Tail, Whitcoombe, *P.Gr., J.T.J., S.E.*

192. *Nithsdale*—not c. Kirkconnel, *M.W.*; Glencaple, *C.E.M.*; Terregles, *P.Gr.*, *F.W.G.*; Nunwood, *var. b.*, *S.E.*; Glencairn, *J.Cr.*; Tynron, *J.Sh.*; Cowhill, *Ad.* and *S.D.J.*; ab. on G. & S.-W. Rwy., *S.E.*; Thornhill, Cample, *var. b.*; Elliock Brig, *Dv. Annandale*—Ecclefechan, Lochmaben, *Exc.*; Balstack of Milke, *G.Bl.*, c. on Cal. Rwy., Wamphray, Beattock, Hunterheck, Craigmichen, *var. b. J.T.J.* *Eskdale*—Dickstree, *E.Ty.*; Burnfoot, *S.E.*; Castle O'er, *J.Wl.* and *R.Bl.*

193. shingle, rocks, or sand, often dead seaweed drift line; fully exposed to wind and sun.

192. moist roadsides, sandy alluvium, cindery embankments; almost always wind-sheltered in full sun exposure. *Visitors*—192. *Platychirius manicatus* ab., *Cordylura* sp. ab., *Anthomyids* 5 or 6 unnamed kinds.

193. *Eristalis pertinax*, *Empis vitripennis*, *Cordylura* ab., *Chortophila* ab., 7 unnamed kinds.

***Lychnis vespertina* Sib.** (White or Evening Campion).

Records. Dfs.—J. Cruickshank, 1836; *Kcd.* and *Wgt.*—J. M'Andrew, 1882, 1885.

Localities. Nithsdale—Kirkconnel, *M.W.*; Castle-Douglas, *Th.*; Cargen, *Hu.*; Maxwellton *Hu.*, *F.W.G.*; Tinwald Road, *S.E.*; Nithside, *M.J.H.*; Newton, *S.E.*, *C.E.M.*; Dunscore Road, *Th.*; Woodlea, 400 ft.; Penpont, *J.Cr.*; Tynron, *J.Sh.*; Holywood, *S.E.*; Cowhill, *Ad.* and *S.D.J.*; Thornhill, *Dv. Annandale*—Priestside, Browhouses, below cliff at Torduff, *S.E.*; by railway, Moffat, *J.T.J.* *Eskdale*—Old Gretna, *S.E.*

Usually moist or dry places; roadsides, cornfields, on boulder clay, &c.; full sun or half in shade; partly wind-sheltered by hedges, cliffs, &c. Appears June 11-14, *J.T.J.*

Visitors. *Platychirius manicatus*, *peltatus*, *Empis livida*, *Chordelura* sp., *Anthomyidæ*, *Tipulæ*, Moths and *Bombus pratorum*.

***Lychnis diurna* Sibth.** (Red or Day Campion.)

Records. Dfs.—P. Gray, 1850; *Kcd.*—J. Cruickshank, 1836; *Wgt.*—J. M'Andrew, 1882.

Localities. Nithsdale—Kirkconnel, *M.W.*; Mavisgrove, *J.Cru.*; Cluden and Routenbrig, *C.E.M.*, *Dv.*; Glencairn, *J.Cr.*; Nith and Sanquhar, *Hu.*, *Dv. Annandale*—To Whitstonehill of Milke, Dryfe, *v.c.*; Kirtle, *G.Bl.*; Grey Mare's Tail, 1750 ft. Black's Hope,

J.T.J. Eskdale—Kirkandrews, *E.T.*; c. Langholm, *S.E.*; Castle O'er, *J.Wl.* and *R.Bl.*

Damp or dry places; leafmould, holms, roadsides, occasionally whinstone or other rocks; usually half shaded, in deep shade when more white, or in sun and deeper colour; almost always wind-sheltered. Appears May 4 to 23, *J.T.J.*

Visitors—*Platychirius manicatus*, *Tipulæ* and another. *Bombus lucorum* ab. and main fertiliser.

***Lychnis floscuculli* L. (Ragged Robin).**

Records. Dfs. and *Kcd.*—P. Gray, 1850; *Wgt.*—J. M'Andrew, 1882.

Localities. C. in all the valleys as far as Sanquhar, *Dv.*, and Glencairn *J.Cr.* 7 miles up the Dryfe, *G.Bl.*; Beeftub, Grey Mare's Tail, *S.E.*; and Castle O'er, *J.Wl.* and *R.Bl.*

A white variety has been found at Palnackie, *J.T.J.*; Murrayfield, *G.Bl.*; and in the Wauchope, *S.E.*

Usually damp or wet ground; most abundant on boulder-clay or whinstone detritus; always in sun and partly wind-sheltered by rush or grass, otherwise exposed. June 11, 14, 27, *J.T.J.*

Visitors. *Rhingia rostrata*, *Hydrotea* sp., *Platychirius* sp., *Homalomyia*, *Bombus lucorum* ab., *muscorum*.

***Lychnis Githago* Lam. (Corncockle).**

Records. Dfs.—Tynron, J. Shaw, 1882; *Kcd.*—Mrs Gilchrist Clark, at the Ross (1867?); *Wgt.*—Bed of Cree, Miss Hannay, 1891.

Localities. Also found at Annan, *Fu.*; Moniaive, *J.Cr.*; Sanquhar Station, *Dv.*; Dumfries, *P.Gr.*; Gilnockie, *S.E.*

(An escape introduced with seed-corn.)

***Lychnis viscaria* L.**

Records. Kcd. and *Dfs.*—Rev. J. Singer, 1843.

Localities. Port o' Warren, Lot's Wife, *P.Gr.*, *Fq.*, *J. M'A.* (Moffat hills, *J.Sn.*?).

***Sagina Nodosa* Fenzl.**

Records. Dfs. and *Kcd.*—P. Gray, 1850; *Wgt.*—G. C. Druce, 1883.

Localities. Glencaple, *F.W.G.*, *J.Fn.*, *J.Wl.*; Kenneth Bank, *C.E.M.*; Jardine Hall, *Th.*; Dalveen, *Dv.*, *J.Wl.*; Torduff Point, *S.E.*; Lochmaben, *Exc.*; Craigmichen Scaur, *J.T.J.*

Rather wet ground; stony or sandy soil or concrete; exposed. July 26, *J.T.J.*

*Sagina Subulata** Presl.

Record. *Dfs.*—J. T. Johnstone, 1890; *Wgt.*—U. C. Bailey, 1883.
Locality. Sandhills, Torrs, Warren, *C.C.B.*; on the Beeftub Road between 1100 and 1300 ft., *J.T.J.*, *S.E.*; Castlehill, Glencairn, *J.Cr.* Stony roads. Aug. 4, *J.T.J.*

Sagina procumbens L. (Pearlwort).

239. *Maritima var. a.* *Records.* *Dfs.*—G. F. Scott-Elliot, 1892.

Kcd.—J. M'Andrew, 1883; *Wgt.*—Arnott, 1843.

Var. c. densa. *Wgt.*—J. M'Andrew, 1890.

240. *Apetala.* *Kcd.* and *Wgt.*—J. M'Andrew, 1883 and 1890.

242. *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—J. M'Andrew, 1882.

Localities. 239 a. Annan mouth *S.E.*, Kirkcolm *Arn.*; 239 c West Tarbert *J.M.A.*; 240 South Drummore *J.M.A.*; 242 v.c. in all the valleys, particularly below 700 or 800 ft.

242. Dry or very dry places on walls, hard roads, cinders of railways, waste ground, shingle; shade or in sun; usually bare ground and exposed to wind; 240 apparently prefers turf and shelter of herbage, &c.; 239 *var. a.* only seen once in wall crevices, 239 *var. c.* apparently bare, much exposed places.

Visitors. Ants ab.

Arenaria verna L.

Records. *Dfs.*—Drumlanrig, J. Cruickshank, 1836. *Kcd.*—J. A. Brown, 1836.

Locality. Craig near Piper's Cove, Torrheugh Cliffs, Colvend (has been confirmed by Rev. J. Fraser, Dr Grierson, and Mr M'Andrew).

Arenaria peploides L. (Sea Purslane).

Records. *Dfs.*—J. Cruickshank, 1839; *Kcd.*—Rev. J. Fraser, 1866; *Wgt.*—J. M'Andrew, 1883.

* I cannot help considering this the right name for Mr Johnstone's plant, after careful comparison with the specimens in the British Museum. Rev. E. F. Linton supposes it to be *Sagina procumbens var spinosa*.

Localities. c. on shore, *Rerwick J.Fr.*, *Colvend Hu.*, *C.E.M.*, *Th.*, *Caerlaverock J.Cru.*, c. on shore, *Seafield S.E.*, *Powfoot M.J.H.*, *Gretna S.E.*, &c.

Usually in sand or gravelly shingle and fully exposed.

Visitors. *Anthomyia radicans* ab. *Sapromyza rorida* ab.

***Arenaria serpyllifolia* L.** (Sandwort).

Records. *Dfs.*—*J. Cruickshank*, 1831; *Kcd.*—*P. Gray*, 1850; *Wgt.*—*J. M^cAndrew*, 1887. *Var. c. leptoclados*, *Messrs Johnstone and M^cAndrew*, 1889.

Localities. *Nithsdale.*—*Racks Station* and *G. & S.-W. line* occasionally *S.E.*; *Dalbeattie Road Hu.*; *Newton Th.*, *C.E.M.*, *S.E.*; *Sanquhar Dv. Annandale*—*Newbie*, *Powfoot M.J.H.*; *Hollis Linn Brig*, *Beattock J.T.J.* *Eskdale*—*N.B. Railway line*, *Liddel Brig to Langholm*, ab. *Glentarras Distillery S.E.* *Var. c.* *New Edinburgh Road*, *Moffat J.T.J.*, *J.M^cA.*

Cinders and stones of railways, sandstone or whinstone walls, gravel, hard macadam, short turf; always dry or very dry spots; fully exposed.

Visitors. *Thrips*, *Syrirta pipiens*, and two unnamed kinds.

***Arenaria trinervis* L.** (Sandwort).

Records. *Dfs.*—*J. Cruickshank*, 1839; *Kcd.*—*P. Gray*, 1850; *Wgt.*—*J. M^cAndrew*, 1885.

Localities. *Nithsdale*—*Cargenbrig*, *C.E.M.*; *Brownhall*, *J.Cru.*; *Craigs*, *M.J.H.*; *White Bridge*, *Hu.*; *Cluden Mill*, *Th.*, *S.E.*; *Sanquhar, Dv. Annandale*—*Dryfe Road*, *Lockerbie*, *J.T.J.*; *Tundergarth*, *S.E.*; *Craiglands*, *Beattock*, *Dumcrief*, *Old Edinburgh Road*, *Old Well Road*, *J.T.J.* *Eskdale*—*Two miles from Langholm*, near *Irvine*, *S.E.*

Damp or wet places on humus, roadside mud, sandy or rocky soil; shaded or half-shaded; sheltered.

Visitors. *Sphagina clunipes* ab., *Platychirius scutatus*, *Empis ignota*, *Ichneumon* sp.

***Cerastium vulgatum* L.** (Mouse-ear Chickweed).

212. *Tetrandrum.* *Kcd.* and *Wgt.*—*J. M^cAndrew*, 1882 and 1890,
214. *Semidecandrum.* *Dfs.*—*Dr Davidson*, 1886?; *Kcd.*—*P. Gray*, 1850; *Wgt.*—*J. M^cAndrew*, 1883.

215. *Glomeratum*. *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—J. M'Andrew, 1883.
216. *Triviale var. a.* *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—G. U. Druce, 1883. *Var. c. pentandrum.* *Kcd.*—F. R. Coles, 1883. *Var. d. alpestre.* *Dfs.*—G. F. Scott-Elliot, 1892.

Localities. 212 only from Drummore; 214 Port Logan (capsules very long, gland hairs very few, *A. Bennett*), *J.M.A.*; Sanquhar *Dv.*? (not seen). *Nithsdale*—215 and 216 v.c. to Moniaive (*J.Cr.*) and Sanquhar (*Dv.*). *Annandale*—215 and 216. v.c. to 2000 feet, Blackshope, *J.T.J.* 216*d.* Whitcoombe, Auchencat Burn, Craigboar, *S.E.* *Eskdale*—215 and 216*a.* v.c. to Castle O'er, *J.Wl.* and *R.Bl.*, and Pikethow 1500 ft. *S.E.*

215 dry railway lines, hard roadsides, waste ground, always exposed; 216*a.* pretty dry or damp places, roadsides, turf on walls, railways, waste ground, shingles, and all soils except peat; sometimes half-sheltered by grasses and half-shaded; 216*d.* dry whinstone rocks above 1400 ft. (*cf. C. alpinum*). Appears May 4th to 25th, *J.T.J.*

Visitors. *Syrphus arcuatus*, *Syrphus* sp. *Platychirius manicatus*, *Hydrellia griseola*, and three other species.

Cerastium arvense L.

Records. *Dfs.*—J. Cruickshank, 1836; *Kcd.*—P. Gray, 1844; *Wgt.*—J. M'Andrew, 1883 (no rec. Cum., Ayr).

Localities. *Nithsdale*—Kirkconnel, *M.W.*; Racks, *Hn.*, *S.E.*, Portland Place, *P.Gr.*; Newton, *S.E.*; New Bridge, *P.Gr.*; Portrack? *S.E.*; also, *Annandale*—Annan, *Hn.*

Dry, gravelly soil mixed with cinders, turf on walls, leaf mould; exposed or rarely shaded; windy spots.

Visitors. *Opomyza germinationis*, *Meromyza* sp., and three other kinds (caught rather late in season).

Cerastium alpinum L.

Record. (a, lanatum.) *Dfs.*—Rev. J. Singer, 1843.

Localities. *Annandale*—1450 to 2000 feet on Blackshope and Whitcoombe, *J.T.J.*, *S.E.*

On dry bare whinstone rocks fully exposed. Appears June 22 to July 1, *J.T.J.*

Visitors. *Chortophila* several kinds ab.

Stellaria nemorum L. (Stitchwort).

Records. *Dfs.*—Dr Burgess, 1789; *Kcd.*—J. Cruickshank, 1839; no. rec. *Wgt.* and *Lan.*

Localities. *Nithsdale*—Gilliehill, *R.H.M.*; Castle-Douglas Road, *C.E.M.*; Lincluden Abbey, Cluden Brig and Mills *P. Gr., Hu., S.E.*; Woodlands, Iron Gray, *S.E.*; Bennan, Tynron, *J.Sh., T.Br., J.Cr.*; Enoch Castle, *J.Wl.*; Auldgirth, Drumlanrig, *Dr., Annandale*—Springkell, Hoddam Castle, Broomholm, Glen Æ wood, *Br.*; Milke, Tundergarth, Whitestonehill, *G.Bl.*; Marchbankwood to Craiglands, Garpel and Beld Craig, *Sd.*; Barnhill, Wellburn, *J.T.J.* *Eskdale*—Glenzier, *E.Ty.*; Priors Linn, Penton, Byreburn, Tarras, v. ab. from Canobie to Langholm, Bexburn, *S.E.*

Damp or wet, rarely dry leafmould, roadside or other soils mixed with leafmould; usually in shade and always wind-sheltered. Appears May 2 to 29, *J.T.J.*

Visitors. Empis 2 or 3 sp., Dolichopidæ, Chlorops sp., Anthomyidæ, Tipulæ very ab. (about 20 unnamed species), Meligethes œneus very ab.

Stellaria media Vill (Chickweed).

Records. *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—G. C. Druce, 1883; *Var. neglecta*; *Dfs.*—Dr F. W. Grierson, 1882.

Localities—v.c. in all the valleys reaching Moniaive, *J.Cr.*, and Sanquhar, *Dv.* to a height of 1400 ft. Annan and Moffat, *J.T.J.*, and 1500 ft. Esk, *S.E.*

Damp or wet, springheads, more rarely dry places; waste ground, roadsides, shingles of rivers and shore and other soils (except peat); usually exposed to sun, sometimes in shade; often wind sheltered. Appears March 23, *J.T.J.*

Visitors. Chalcid. 3 sp., Proctotypes, Phora, Dolichopid 2 sp., Chlorops (numerous small flies). Meligethes œneus ab.

Stellaria uliginosa Murr.

Records. *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—G. C. Druce, 1883.

Localities. *Nithsdale*—Arbigland, *Th.*; Maxwelltown Station, Tinwald, *Hu.*; Tynron, *Sh.*; Auldgirth Brig, *S.E.*; Sanquhar, *Dv.*; c. upper part of valley. *Annandale*—Troutbeck of Milke, Gillenbie Mains of Corrie, *G.Bl.*; c. Putts and Annan shingles

Moffat, Beeftub, 1000 ft., *J.T.J.*; Hartfell burns, 2000 ft. Loch-Skene and very ab. springs, &c., *J.T.J.*, *S.E.* *Eskdale*—Canobie Tarras, Langholm ab. 1400 ft., Whitehope, *S.E.*

Wet places, mud of spring heads, ditches; on roadsides, whinstone, boulder clay, &c.; usually sunny places; partly wind-sheltered by other plants or ditch sides. Appears May 4, *J.T.J.*

Visitors. Chlorops, Anthomyids, Tipulæ, Dolichopids (many unnamed).

***Stellaria graminea* L.**

Records. *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—J. M^rAndrew, 1882.

Localities. *Nithsdale*—v.c. Kirkconnel, all roads about Dumfries; Moniaive, *J.Cr.*; Sanquhar, *Dv.* *Annandale*—v.c. Gretna Green, Annan, *S.E.*; Dryfe, Milke, *G.Bl.*; Beld Craig, *Sd.*; c. Moffat, *J.T.J.* *Eskdale*—c. Glenzier, Canobie, *E.Ty.*; c. Langholm, *S.E.*; Castle Oer, *J.Wl.*, *R.Bl.*

Dry or damp places; roadsides and all other soils; sunny, occasionally shaded; always wind sheltered in long grass or by hedges, &c. Appears June 7 to 28, *J.T.J.*

Visitors. *Empis livida*, *Syritta pipiens*, *Platychirius peltatus*, Dolichopids. (4 unnamed).

***Stellaria glauca* With.**

Records. *Dfs.*—J. Cruickshank, 1839; *Kcd.*—P. Gray, 1844 (also *rec. Cum.*)

Localities. Maxwellton Loch, *P.Gr.*; Tinwald, *J.Sn.* (and *J.Cru.* ?); Lochmaben, *F.M.W.*, *Dv.*; Dumcrieff, Moffat, *S.W.Ca.*

Wet, half-peaty ditches; exposed to wind and sun.

***Stellaria holostea* L.**

Records. *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—J. M^rAndrew, 1883.

Localities. *Nithsdale*—c. roads about Dumfries, *M.J.H.*, *C.E.M.*, *Th.*, *Hn.*; Dunscore, *P.Gr.*; Moniaive, *J.Cr.*; Tynron, *J.Sh.*; Sanquhar, *Dv.* *Annandale*—Annan, Water of Æ ab., *S.E.*; Lockerbie House to Troutbeck of Milke, *G.Bl.*; Beld Craig, *J.Sd.*; c. Moffat, Correifron, &c., *J.T.J.* *Eskdale*—very ab. Woodslee, *E.Ty.*; Tarras, *S.E.*

Rather dry roadside banks, on old turf of walls, cinders of railways, shingles, gravelly soil, more rarely holms and leaf

mould; usually in sun, sometimes shaded; often quite unsheltered by other plants, and rarely in long grass. Appears April 5 to May 15, *J.T.J.*

Visitors.—*Empis pennata*, *Siphona cristata*, *Platychirius manicatus*, and 2 or 3 other flies. *Meligethes œneus*, *Telephorus bicolor*.

***Spergularia rubra* Pers.** (Sandspurrey).

248. *Rubrum*. *Records*. *Dfs.*—Dr Grierson, 1882; *Kcd.* P. Gray, 1844; *Wgt.*—Arnett, 1848.

249. *Salinum a. genuinum*. *Dfs.*—G. F. Scott-Elliot, 1892. *Kcd.*—Rev. J. Fraser, 1866. *Wgt.*—G. C. Druce or F. R. Coles, 1883.
c. neglectum. *Wgt.*—G. Horn, 1873.

250. *Marginatum*. *Dfs.*—G. F. Scott-Elliot, 1892. *Kcd.*—Rev. J. Fraser, 1866. *Wgt.*—Miss Hannay, 1892.

251. *Rupestre*. *Kcd.*—Craig Christie, 1868. *Wgt.*—G. Horn, 1873.
Localities.—Seacoast pretty common; 249 *a.* from Annan shore, Rerrick, Orchardton and Port Mary; 249 *c.* from Port Logan, *G. Horn* and *J. M. Andrew*; 250 from Kirtle, *S.E.*; Rerrick, *J. Fr.*; Port-William and Glasserton, *Hu.*; 251 from Port Logan, *J. M. A.*; Portpatrick, *R.R.*; Mull of Galloway, *G. Ho.*; Kirkandrew, *C.C.*; Inland, less common, 248 road from Brow to Stank, Bankhead, *S.E.*; Glencaple, *Hu.*; Bruce's Castle, Lochmaben, *F.M.W.*; Junction Selkirk and Craigbeck Road, Broomhill, New Edinboro' Road, *J.T.J.*; Beattock, *S.E.*

Wet places, rarely fairly dry stones; bare estuarine mud of seashore with *Armeria*. stony shingles of seashore, sandy places or rock crevices (251), hard roadsides (248). Appears end of June.

Visitors.—*Apis* very ab., *Nemotelus notatris*, *Lucilia Cæsar*, *Scatophaga litorea*, *stercoraria*, *Nemopoda stercoraria*, *Chlorops*, and 3 other kinds of flies.

***Spergula arvensis* L.** (Corn Spurry).

Records. *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—F. R. Coles, 1872 (both varieties *a sativa* and *b vulgaris*).

Localities. Common in arable land in all valleys to Moniaive (*J. Cr.*), and Sanquhar (*Dv.*), at least 700 feet Moffat (*S.E.*), Castle O'er, Eskdale (*J. Wl.* and *R. Bl.*).

Fairly dry or moist places; waste ground in fields, rocks by shore, boulder clay, sandy or even half-peaty soil; almost

always exposed to sun and wind. Appears May 24 to June 2, *J.T.J.*

Visitors. *Syritta pipiens*, *Platychirius manicatus*, *scutatus*, *albinus*, *Rhingia rostrata*, *Empis vitripennis*, *Anthomyia radicum*, *Scatophaga stercoraria*, *Chortophila*, &c.

Montia fontana L. (Blinks).

Records a. minor. *Dfs.*, *Kcd.*—P. Gray, 1850; *Wgt.*—J. M^rAndrew, 1886, *b. rivularis*; *Dfs.*—J. Sadler, 1857; *Kcd.*—F. R. Coles, 1883.

Localities. *Nithsdale*—Cargen, *F.W.G.*; Glencaple, *C.E.M.*; Broomrigg, *Dv.*; Barndennoch, Tynron, *J.Sh.*; Glencairn, *J.Cr.*; Sanquhar, *Dv.* *Annandale*—Jardine Hall, *Th.*; Dryfe Cemetery, *G.Bl.*; Andrew's Well, var. *b.*, *S.W.Ca.*; Grey Mare's Tail, *Sd.*; c. Hartfell and Loch Skene, reaching 2300 ft., *S.E.* *Eskdale*—C. at Langholm, &c., *S.E.*

Var. b. on wet or often dry mud, *b. in* the water or much protected by other plants; both at origin of springs, shingles of rivers, on peaty or other mud; always in sun, and usually preferring mud bare of other plants. May 17, *J.T.J.*

Visitors. *Chlorops* sp., *Anthomyia*?

Hypericum Androsæmum (Tutsan).

Records. *Kcd.*—J. M^rAndrew, 1882; *Wgt.*—Professor Balfour, 1843 (no. rec. *Lan. Rox.*).

Localities. Kirkcolm, *J.H.Bl.*; Cruggleton, Garlieston, Cuicton Lake, *Hn.*; Flarick Glen, Ravenshall, *J.M.A.*

Grassy cliffs or roadside bank facing sea; sheltered from wind.

Hypericum Perforatum L. (St. John's Wort).

Records. *Var. a.* *Dfs.*—P. Gray, 1850; *Kcd.*—Miss Harvey (1830?); *Wgt.*—J. M^rAndrew, 1882; *Var. b. augustifolium*; *Dfs.*—J. T. Johnstone, 1891; *Var. c. lineolatum*, *Dfs.*—J. T. Johnstone, 1891.

Localities. *Nithsdale*—Kirkconnel, *M.W.*; Glencaple road, *M.J.H.*; Troqueer, *C.E.M.*; Nith, by Dumfries, *Hn.*; Portrack, *S.E.*; Cluden, *Th.*, *Hn.*; Moniaive, *J.Cr.*; Sanquhar, *Dv.* *Annandale*—Seafield, Kirtle mouth, *S.E.*; Ecclefechan, *Kxc.*; Lochnaben, *S.E.*; Boreland, Whitstonehill and v.c. Milke, Dryfe, *G.Bl.*;

Wamphray, Jordan, Barnhill road var. *c.* Hydropathic, *J.T.J.* ; Beld Crag, *J.Sl. Eskdale, c., E.Ty.*

Dry or moist banks on railway cuttings, leafmould, sandy gravel, or sandstone; usually sunny or rarely shaded places; partly wind-sheltered by other plants, hedges, &c. Appears from July 3 to Aug. 15, *J.T.J.*

Visitors. *Bombus lucorum, pratorum, Derhamellus, Hive-bee* all ab.

Empis livida ab., *Rhingia rostrata*, *Syrphus balteatus*, *Hydrotea* sp., *Cheilosia* sp., *Anthomyia radicum*, *Chortophila*, *Chlorops*, and 8 other forms.

Hypericum quadrangulum L.

Records. *Var. a. dubium.* *Dfs.*—J. F. Johnstone, 1891; *Kcd.*—F. R. Coles, 1882; *Wgt.*—J. H. Balfour, 1845. (No rec. *Rox. Feb.*) *Var. b. maculatum* *Dfs.*—Miss Ethel Taylor, 1892; *Kcd.*—J. M^cAndrew, 1882.

Localities. *Nithsdale*—Troqueer Road, *Th., C.E.M. Annandale*—C. from Scroggs upwards on Milke, *G.Bl.*; Johnstone parish, *J.T.J. Eskdale*—Between Liddell Brig and Canobie Station (*var. a.*), *S.E.*; Canobie (*var. b.*), *E.Ty.*; Castle O'er, *J.WL., R.Bl.*

Damp embankment on boulder-clay, roadsides; shaded or open to sun; more exposed to wind than perforatum?

Visitors. *Bombus lucorum, muscorum, pratorum, Hive-bee, Leptis tringaria, Sepsis cynipsea, Anthomyia, radicum, Chortophila, &c.*

Hypericum quadratum Stokes.

Records. *Dfs.*—Dr F. W. Grierson, 1882; *Kcd.*—F. R. Coles, 1882; *Wgt.*—J. M^cAndrew, 1885.

Localities. *Nithsdale*—Glencaple, *C.E.M.*; Clarencefield, *F.W.G.*; Sanquhar, *Dv. Annandale*—Milke water, Catch Hall Loaning, *G.Bl.*; Archbank Bridge, Alton, Craigieburn, Breconside Moss up to 6 or 700 ft., *J.T.J. Eskdale*—Woodslee orchard, Liddel Brig, Burnfoot, *S.E.*

Wet or pretty dry slopes; roadsides, railway banks, shaded or partly shaded; wind-sheltered in long grass, &c. Appears July 5, *J.T.J.*

Visitors. (Left too late.)

Hypericum humifusum L.

Records. *Dfs.*—J. Sadler, 1857; *Kcd.*—P. Gray, 1848; *Wgt.*—Stranraer (J. A. Brown?), 1836, Edin. Herb.

Localities. *Nithsdale*—Kenneth Bank, Glencaple, *C.E.M.*; Kirkconnel, *M.IV.*; Cargenhillside, *Hn.*; Dalskairth Hills, *P.Gr.*; Barndennoch, 600 ft., *J.Cr.*; G. & S.-W. Ry., Gateside, Euchan Cottages, *Dv.* *Annandale*—Kirtlemouth, *S.E.*; Limestone Rigg, Shillahill, Scroggs, Middlebie, *G.Bl.*; Lochmaben, *Hn.*; Raehills, *Exc.*; Beld Craig, *Sd.*; c. Moffat, *J.T.J.* *Eskdale*—Glenzier Mill, *E.Ty.*; Langholm, *C.Y.*; Wauchope, 2 miles from Langholm, *S.E.*

Dry bare places on road sides, sandstone, rather peaty loam; usually in sun and partly wind sheltered. Appears from June 23, *J.T.J.*

Visitors. Anthomyidæ (4 visitors).

Hypericum pulchrum L.

Records. *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—J. M^r Andrew, 1885.

Localities. *Nithsdale*—c. Kenneth Bank, *C.E.M.*; Cargen, *F.IV.G.*; Lochabbey Wood *C.E.M.*; Nunholm, *Hn.*; Cluden, *Th.*; c. Moniaive, *J.Cr.*; c. Sanquhar, *Dv.* *Annandale*—Annan, Springkeld, *S.E.*; Ecclefechan, Raehills, *Exc.*; Dryfesdale, *G.Bl.*, Garpel, *S.E.*; Beeftub, *Sd.*; Breconside, reaching 2000 ft. Loch Skene, *S.E.*; *Eskdale*—c. Kirkandrews, *E.Ty.*; Langholm Hill, *C.Y.*; Castle O'er, *J.IVl.* and *R.Bl.*; Stennies and Meggat, *S.E.*

Dry or moist whinstone rocks, roadsides, more rarely on humus or boulder clay; in sun or part or wholly shaded; usually at least partly wind-sheltered. Appears June 30 to July 6, *J.T.J.*

Visitors. Hivebee, *Sericomyia borealis*, *Siphona cristata*, *Drymeia hamata*, *Hyetodesia basalis*, *Dolichopidæ*, *Chortophila* (4 unnamed).

Hypericum hirsutum L.

Records. *Dfs.*—Dr Davidson, 1882; *Kcd.*—P. Gray, 1844.

Localities. *Nithsdale*—Castle-Douglas Road and Glen, *J.IVl.*, *Th.*, *C.E.M.*; Bankhead, Newark Ardoch, Sanquhar, *Dv.* *Annandale*—Scroggs, *G.Bl.*; Waumphray Station, Moffat, *J.T.J.* *Eskdale*—Liddel Brig, Bilholm, *S.E.*

Moist or dry sloping banks and meadows; carboniferous sandstone, boulder clay leaf mould, whinstone soils; usually in shade and always well sheltered spots. Appears Aug.

Visitors—*Bombus pratorum*, *lucorum*, *Syrphus balteatus*, *Empis vitripennis*, *Scatophaga inquinata*, *stercoraria*, *Chortophila*.

***Hypericum elodes* L.**

Records. *Kcd.*—Rev. J. Fraser, 1843; *Wgt.*—Dr Balfour, 1843.
(Also *Cum. Ayr.*)

Localities. Portpatrick, *Arn.*; Port Logan, *J.H.Bl.*; ditch, Newton-Stewart to Glenluce, *Mau.*; Loch Cree, *G.M.N.*; New-Galloway, *J.M.A.*; Minnigaff, *Su.*; Barscraigh, *J.Fr.*; Barnhourie, *R.R.*, *P.Gr.*; Kirkbean, *Su.*

Wet, peaty soil in ditches; fully exposed.

***Linum perenne* L.**

Records. *Dfs.*—Dr Davidson, 1886; *Kcd.*—Rev. J. Fraser, 1843.

Localities (escape). Kirkcudbright, *J.Fr.*; Brighthouse Bay, *F.R.C.*; Ross, Rockville, *G.C.*; Sanquhar (?), *Dv.*

On hillsides near highwater mark.

***Linum angustifolium* Huds.**

Records. *Kcd.*—Colvend, Miss C. E. Milligan, 1892 (escape).

***Linum usitatissimum* L.**

Records. *Dfs.*—P. Gray, 1850; *Kcd.*—J. M^rAndrew, 1892.

Localities. Near Dumfries, *P.Gr.*; Drummond's Yard, Moffat, 1891 and 1892, *J.T.J.* (escape).

***Linum catharticum* L. (Purging flax).**

Records. *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—J. M^rAndrew, 1882.

Localities. *Nithsdale*—v.c. near Dumfries and Cluden, *Th.*, *C.E.M.*, *F.W.G.*; *Moniaive*, c. *J.Cr.*; *Sanquhar*, c. *Dv.* *Annandale*—v.c., *Dryfe*, *Milke*, *Corrie*, *G.Bl.*; *Caledonian Line*, c., *S.E.*; *Beeftub*, *Sd.*; to 2300 feet *Loch Skene*, *S.E.* *Eskdale*—c. *Glenzier*, *E.Ty.*; c. *Esk*, *Wauchope*, *S.E.*; *Castle O'er*, *J.Wl.* and *R.Bl.*; to 1400 ft. *Ewes Water*, *S.E.*

Dry or moist places on gravelly or stony soil, sandstone soil, railway cinders, c. old moraines. Almost always in full sun; in short turf or bare spots exposed to wind, though in valleys. Appears June 12-25, J.T.J.

Visitors. *Platychirus manicatus*, *Empis vitripennis*, and 2 doubtful forms.

Radiola millegrana Sm. (Allseed).

Records. *Dfs.*—Dr Burgess, 1789; *Kcd.*—J. M'Andrew, 1882;

Wgt.—Arnott, 1848 (also rec. Ayr. Rox.)

Localities. Port Logan, Portpatrick, *Arn.*; Loch Ken, *C.E.M.*, *J.M.A.*; Ravenston, New-Galloway; *J.M.A.*, *F.R.C.*; Lochmaben, Little Dormont, on north side of road from Brow to Stank Ruthwell, *Br.*

Sandy paths on moor, *Br.*; damp gravelly roadsides, *J.M.A.*; shingle of banks, *C.E.M.*

Lavatera arborea L.

Records. *Wgt.*—J. M'Andrew, 1890.

Malva Moschata L. (Musk Mallow).

Records. *Dfs.*—J. Shaw, 1882; *Kcd.*—P. Gray, 1844; *Wgt.*—G. Graham, 1836. (No rec. Peb.)

Localities. Port William, *J.M.A.*; Senwick Bay (? Sandwick), *J.Sh.*; Balmæ, *G.N.Ll.*; Colvend, *Th.*; Tongland, *F.R.C.*; Mullock Bay, Almorness, *J.M.A.*; near Dumfries, *P.Gr.*; Locharbriggs, *Hn.*; Uraigencoon, Tynron, *J.Sh.*; (Sanquhar, *Dv.*?); Cowhill, *Ad.* and *S.D.J.*; Torduff shore, *S.E.*; Milke, above Scroggs, *G.Bl.*; Raehills, *Exc.*, (Gardenholm, Moffat, *J.T.J.*; Langholm, *C.Y.*

Shingles of shore, roadsides, river banks, full exposure or partly wind-sheltered.

Visitors. Hive bee, *Bombus pratorum*, *Derhamellus* (all Miss Hannay).

Malva rotundifolia L.

Records. *Dfs.*—Mrs Carthew-Yorstoun (1880?); *Wgt.*—J. M'Andrew, 1892. (Rec. Ayr.)

Localities. Cairnryan, *J.M.A.*; roadside Canobie Manse, Langholm, *C.Y.*; Gilnockie siding, *S.E.*

Malva sylvestris L.

Records. *Wgt.*—J. M'Andrew, 1890; *Kcd.*—P. Gray, 1865; *Dfs.*—Miss Adams and Miss Johnstone, 1889.

Localities. *Nithsdale*—Carsethorn, *F.W.G.*, *Hn.*; Glencaple road, *M.J.H.*; Glen, *P.Gr.*; Whitebridge and Cluden, *Hn.*, *S.E.*; Glencairn, *J.Cr.*; Cowhill, *Ad.* and *S.D.J.*; Holywood Kirk, *S.E.* *Annandale*—Browhouses, *S.E.*; Powfoot, *M.J.H.*; Amnan

wall, *Hn.*; Jardine Hall, *Th.*; Lochmaben, *M.J.H.*; Beattock, *J.T.J.* Eskdale—Cummertrees, Gretna, *S.E.*; Henry's Town, *E.Ty.*

Dry, stony, or gravelly waste soil; in sun or shade; usually partly wind-sheltered.

Visitors. *Bombus Derhamellus*, *Hn.*; *lucorum*, *S.E.*; *Platychirus manicatus*, *Syricta pipiens*, *Hn.*

***Althea officinalis* L.** (Marsh mallow).

Records. *Dfs.*—J. T. Johnstone, 1889; *Kcd.*—Dr Burgess, 1789.

Localities. Moffat, *J.T.J.*; Arbigland (in cultivation now), *Dr. Br.*, *M.W.*

***Tilia europea* L.** (Lime tree).

Recorded. *Dfs. Kcd. Wgt.*—J. M. Andrew, 1882; commonly planted at Drumlanrig 250 to 600 feet, *J.H.D.*; Langholm, 500 to 600 feet, *R.Do.*; Moffat c., *J.T.J.*

Dry (*J.H.D.*) or damp (*R.Do.*) places on holms or good loam; requires plenty of light and air, but shelter from strong winds (*J.H.D.* and *R.Do.*)

***Tilia grandifolia* Ehrh.**

Record. *Dfs.*—Moffat, J. Sadler, 1857.

***Geranium sanguineum* L.** (Blood Crane's bill).

Records. *Kcd.*—P. Gray, 1841; *Wgt.*—Edin. Herb., 1843.

Localities—Very common along the shore from the Mull to Southerness and Carsethorn, *Hn.*, *F.W.G.*, but not found in Dumfriesshire so far as I know.

Full sun and wind exposure on grassy cliffs or broken undercliffs.

Visitors. Hive bee, *Bombus muscorum*, *Hn.*; *Halictus albipes*, *Prosopis hyalinata*, *Licus ferrugineus*, *Rhingia rostrata*, *Drymeia hamata*, *Hydrotea*, *Anthomyia radicum*, *Chortophila*, &c.

***Geranium pheum* L.** (Dusky Crane's bill).

Records. *Dfs.*—Castlemilk, J. H. Balfour, 1839; *Kcd.*—J. M. Andrew, 1882; *Wgt.*—Sir H. Maxwell, 1889.

Localities. Near Moniaive, *J.Cr.*; Kirkburn, Lockerbie, Robert-hill, *G.Bl.*; Dumcrieff, *S.W.Ca.*; Kirkandrews, *E.Ty.*; Billholm *J.Wl.* and *R.Bl.*

Geranium sylvaticum L. (Wood Crane's bill).

Records. *Dfs.*—Drumlanrig, W. Stevens, 1848; *Kcd.*—P. Gray, 1850; *Wgt.*—absent?

Localities. *Nithsdale*—By Nith and Cluden, *P.Gr.*; Langlands, *Hn.*; Cluden, *M.J.H.*; c. Moniaive 3 to 600 ft., *J.Cr.*; Tynron, *J.Sh.*; Penpont, *P.Gr.*; Thornhill, *T.Br.*; Carron glen (a pale pink variety), *W.St., Th., C.E.M.*; Glenquhargen, *Exc.*; Sanguhar, *Dv.* *Annandale*—Jardinehall, *Th.*; Springkeld, *S.E.*; c. to Whitestonehill of Milke, Boreland of Dryfe, *G.Bl.*; v. c. Dinwoodie to Wamphray Cal. Rwy., *S.E.*; Garpel, Beld Craig, *J.Sd.*, reaching waterfall at head Blackshope, and nearly 2000 ft. Loch Skene, *J.T.J.* and *S.E.* *Eskdale*—ab. Woodslee, Canobie, *E.Ty.*; extraordinarily abundant from Canobie to Langholm, Byreburn, Tarras, Wauchope, Meggat, *S.E.*; Castle O'er, *J.Wl.* and *R.Bl.*; MossPaul, *S.E.*

Usually moist leaf mould, carboniferous sandstone or whinstone soils, preferring a slope; almost always shaded or part shaded and wind-sheltered. Appears May 25 to June 12, *J.T.J.*

Visitors. Hive bee ab., *Bombus pratorum* ab., *muscorum*, *Halictus cylindricus*, *Nomada lateralis*, *Empis tessellata*, *pennata*, *vitripennis*, sp., *Platychirius peltatus*, *manicatus*, 5 Anthomyids, &c.

Geranium pratense L. (Field Crane's bill).

Records. *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—J. M'Andrew, 1890.

Localities. *Nithsdale*—Carnsalloch, *Hn.*; Cowhill, *Ad.* and *S.D.J.*; Cluden, *F.W.G., Th., C.E.M.*; Glencairn, *J.Cr.*; Thornhill, Sanguhar, *Dv., Fu.* *Annandale*—Scroggs, Boreland, Sibbaldbie, Cowburn of Corrie, *G.Bl.*; Lochanburn, *Kd.*; c. Moffat, *J.T.J.* *Eskdale*—Canonbie *E.Ty.*; Liddel Brig, Burnfoot, *S.E.*; Castle O'er, *J.Wl.* and *R.Bl.*; Meggat *S.E.*

Moist or dry holms, or sandy alluvial, leaf mould; usually full sun; sheltered from high winds. Appears from July 8 to 29, *J.T.J.*

Visitors. Hive bee (stealing honey from back), *Bombus pratorum*, *muscorum*, *Andrena albicans*, *Platychirius manicatus*, *Anthomyia radicum*, and 3 other kinds.

Geranium Robertianum L. (Robert).

Records. *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—J. M^rAndrew, 1882.

Localities. Very common in all valleys, but not *as a rule* beyond the limit of wooded glens, that is about 7 or 800 ft.

Moist or dry leafmould of woods, roadsides, old mossy walls, usually shade or half-shade; wind-sheltered by woods or banks, prefers ground bare of other plants. Appears May 18 to June 11, J.T.J.

Visitors. *Bombus pratorum*, *Empis pennata*, v. ab., *tessellata*, Anthomyids, *Meligethes œneus*.

Geranium lucidum L.

Records. *Dfs.* and *Kcd.*—P. Gray, 1850 and 1844; *Wgt.*—J. M^rAndrew, 1882. (Also *Ayr, Lan., Rox.*)

Localities. *Nithsdale*—*Craigs, P.Gr.*; *Glen, Th., C.E.M.*; *Penpont, J.Sh.*; *Clauchries, Craighope Linn, Cample, J.Fn., Dr.*; *Glenquhargen, Exc. Annandale*—*Craigieburn, Beeftub, J.T.J.*

Moist atmosphere on whinstone rocks or walls in full shade and shelter. Appears May 18, J.T.J.

Visitors (*Archbank Garden*). *Syrphus cinctellus* ab., *Platychirius manicatus* ab., *Melanostoma mellina*, 3 other *Syrphids*.

Geranium pyrenaicum L.

Records. *Dfs.*—J. Shaw, at *Tynron*, 1882. (Also *Cum., Ayr, Rox.*)

Geranium molle L. (Dootae).

Records. *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—J. M^rAndrew, 1882.

Localities. Very common in all the valleys, but not often beyond the limit of roads and arable land.

Dry roadsides, waste ground, field corners; usually in sun; exposed to wind in short turf or sheltered by hedges and banks. May 5 to June, J.T.J.

Visitors. *Andrena parvula*, *Platychirius albimanus*, *Hydrellia*, and other *Anthomyids*.

Geranium dissectum L.

Records. *Dfs.* and *Kcd.*—P. Gray, 1850.

Localities. C. roads about Dumfries, *Hn.*, *C.E.M.*, *Th.*; Lochanhead, *F.W.G.*; Sanquhar, *Dv.*; c. Annan, *S.E.*; c. Lockerbie, *G.Bl.*; c. Moffat, *J.T.J.*; c. Scotch Dyke, Canobie, *E.Ty.*; Langholm and Tarras, *S.E.* (not so frequent as *molle*, and apparently rarer above 500 feet).

Dry or rather wet roadsides, field margins, gravelly and cindery soils; usually in sun or half-shaded, almost always sheltered by grass or herbage. Appears May 21 to June 21, *J.T.J.*

Visitors. *Platychirius manicatus* and two doubtful Anthomyids.

Geranium columbinum L. (Escape).

Records *Kcd.*—Ross, Mrs Gilchrist Clark (1867?).

Erodium cicutiarum L'Her.

Records. *Var. a vulgatum.* *Dfs.*—J. Fingland, 1887; *Kcd.*—P. Gray, 1848; *Wgt.*—J. M'Andrew, 1887. *Var. b chærophyllum.* *Dfs.*—G. F. Scott-Elliot, 1892.

Localities. *Along the shore*—Monreith, Brighthouse, *J.M.A.*; Sandyhills Bay, *P.Gr.*; Douglas Hall, *J.M.A.*, *Th.*; Southernness, *M.J.H.*; Carsethorn, *Th.*, *C.E.M.*; Arbigland, *Th.*; Powfoot, *M.J.H.*, *S.E.*; Annan Waterfoot, *J.Fn.* *Inland*—Railway between Langholm and Gilnockie, *S.E.*

Dry shingles or turf; full sun and wind exposure.

Visitors. *Anthomyia radicum*, *Hydrellia griseola*, *Chortophila*.

Erodium maritimum L'Her.

Record. *Wgt.*—Herbarium Greville at Edinburgh, 1836.

Localities. Glenluce, Portwilliam, *J.H.Bl.*, *T.B.Bl.*, *J.M.A.*; Monreith Bay, *J.M.A.*; Garlieston, *Hn.*

Dry, sunny shore, in grass.

Oxalis acetosella L. (Wood Anemone).

Records. *Dfs.*—J. Cruickshank, 1839; *Kcd.*—P. Gray, 1850; *Wgt.*—J. M'Andrew, 1882.

Localities. V.C. in all valleys reaching Moniaive, *J.Cr.*, and Sanquhar, *Dv.*, to 2000 feet Loch Skene and 1700 feet Ewesleesknowe, *J.Rae.* Appears April 13 to 28, *J.T.J.*

Wet or rarely dry humus of woods or roadsides; in full shade and wind-sheltered almost always.

Oxalis corniculata L.

Record. *Dfs.*—Established many years Ivy House Garden, Moffat. on gravel walks, J. T. Johnstone, 1892. (Garden escape).

Impatiens Noli-me-tangere (Balsam).

Records. *Dfs.*—Canobie, J. Fingland, 1885; *Kcd.*—J. Matthewson, Dalbeattie, 1882. (Garden escape.)

Impatiens parviflora DC.

Record. *Kcd.*—Fully established Auchencairn Bay, G. F. Scott-Elliot, 1891. (Garden escape.)

Acer Campestre L. (Maple).

Records. *Dfs.*, *Kcd.*, *Wgt.*—J. M^cAndrew, 1882.

Localities. Planted 250 to 340 feet, Drumlanrig, *J.H.D.*; Elliock, *Dv.*; bowling green, Moffat, &c., *J.T.J.*; Scroggs, *G.Bl.*; Langholm woods, not common, *R.Do.*

In old woods, on free deep loam; sheltered rather than exposed, *J.H.Dx.*

Acer platanoides L.

Record. *Kcd.*—F. R. Coles, 1883 (in herb. Dumfries).

Acer pseudoplatanus L. (Sycamore).

Record. *Dfs.*—J. T. Johnstone, 1889; *Kcd.*—J. M^cAndrew, 1882.

Planted. 200 to 800 ft., Drumlanrig, *J.H.Dx.*; Elliock, *Dv.*; c. Lockerbie, *G.Bl.*; c. Moffat, *J.T.J.*; c. Canobie, *E.Ty.*; c. Langholm, *R.Do.*

Prefers dry, strong loam free from stagnant water, but in all soils; prefers sheltered though growing in exposed places, *J.H.Dx.*, *R.Do.*

Ilex aquifolium L. (Holly).

Record. *Dfs.* and *Kcd.*—P. Gray, 1850; *Wgt.*—J. M^cAndrew, 1886.

Localities. Planted frequently from 150 to 800 ft., Drumlanrig, *J.H.Dx.*; Langholm, c. *R.Do.*, &c.

Prefers dry light loam and shelter, *J.H.Dx.*

Euonymus europæus L. (Spindle tree).

Record. *Kcd.*—J. M'Andrew, 1882; *Dfs.*—J. H. Dixon, 1892.

Localities. Senwick, *J.M.A.*; Kirkconnel, *M.IV.*; Broomfields, Glencairn, *J.Cr.*; Drumlanrig, *J.H.Dx.*; Gilnockie, *E.Ty.*

Rhamnus catharticus L. (Hag or Hackberry).

Record. *Dfs.*—Rev. J. Singer, 1843; *Kcd.*—J. M'Andrew, 1882.

Localities. Dalbeattie, *J.Mt.*; *J.Mc.A.*; Keir, Tinwald. *J.Sn.*; Langholm, *R.Do.*

Grows freely in moist ground, *R.Do.*

Rhamnus frangula L. (Buckthorn).

Record. *Dfs.*—Tinwald, Keir, Dr Burgess, 1789; and common Langholm, R. Doughty; *Kcd.*—Dee at Slogarie, J. M'Andrew, 1882.

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 Henry Sawyer, Queen's Place.
 Alexander Scott, Bailie, Annan.
 Rev. J. H. Scott, M.A., Sanquhar.

- George F. Scott-Elliot, M.A., F.L.S., Newton.
James Shaw, Tynron.
Thomas Shortridge (Ex-Provost), Beechwood Bank.
Rev. Richard Simpson, M.A., Dunscore.
Mrs Sloan, Elmbank.
James Smith, Commercial Bank.
James Gibson Hamilton Starke (Advocate), Troqueer Holm.
Peter Stobie, Queen's Place.
William Stone, Brooke Street.
John Symons, Solicitor, Irish Street.
John Symons, Royal Bank.
Philip Sulley, Parkhurst.
John Stevens, M.A., Wallace Hall.
Robert A. Scott, Kirkbank.
Miss Annie Tennant, Aberdour House.
Alexander Thompson, Rosemount Terrace.
Mrs Thompson, Rosemount Terrace.
Miss Mary Thompson, Rosemount Terrace.
Miss Ethel Taylor, Kirkandrew Rectory, Longtown.
Dr Alexander Thomson, Castle Street.
George Thomson, Solicitor, George Street.
James S. Thomson, Plainstones
Rev. John H. Thomson, Hightae, Lockerbie.
James Turner, Greylands.
Alexander Turner, Druggist, Buccleuch Street.
J. R. Wallace, Auchenbrack, Tynron.
William Walls, Bridge Street.
Thomas Watson, Castle Bank.
James Watt, Milnwood.
Rev. Robert W. Weir, M.A., Castle Street.
James W. Whitelaw, Summerhill.
James Williamson, Terregles Street.
James R. Wilson, Royal Bank, Sanquhar.
Robert Maxwell Witham, J.P., Kirkconnel.
Mrs Maxwell Witham, Kirkconnel.
William M. Wright, Charnwood.
Dr John M. Wood, Irish Street.
Miss Wallace, Lochmaben.
Miss Amy Wallace, Lochmaben.

R U L E S .



1. The Society shall be called the “DUMFRIESSHIRE AND GALLOWAY NATURAL HISTORY AND ANTIQUARIAN SOCIETY.”

2. The aims of the Society shall be to secure a more frequent interchange of thought and opinion among those who devote themselves to the study of Natural History, Archæology, and Kindred Subjects; and to elicit and diffuse a taste for these studies.

3. The Society shall consist of Ordinary and Honorary Members. The Ordinary Members shall be persons proposed and elected at any Meeting of the Society by a vote of the majority present. The Honorary Members shall be persons distinguished for attainments connected with the objects of the Society, and elected on the recommendation of the Council.

4. Ordinary Members shall on election pay the sum of 2s 6d entrance fee (ladies excepted), and contribute annually 5s in advance, or such other sum as may be agreed upon at the Annual Meeting. When more than one person from the same family joins the Society all after the first shall pay half-fee, and the maximum amount from any one family shall not exceed 10s. By making a single payment of £2 2s they become Members for Life.

5. The Office-bearers of the Society shall consist of a President, four Vice-Presidents, Secretary, Treasurer, Librarian, Curator of Museum, and Curator of Herbarium, who, together with Ten other Members, shall constitute the Council, holding office for One Year only, but being eligible for re-election. Three to form a quorum.

6. The WINTER MEETINGS of the Society shall be held on the FIRST FRIDAY of each month, beginning with October and ending with May, at which papers will be read and discussed, objects of interest exhibited, and other business transacted.

7. The FIELD MEETINGS shall be held on the FIRST SATURDAY of each month, beginning with June and ending with September, to visit and examine places of interest, and otherwise carry out the aims of the Society. Arrangements for these Meetings shall, as far as possible, be made at the April Meeting.

8. The ANNUAL MEETING shall be held on the FIRST FRIDAY of OCTOBER, at which the Office-Bearers and other Members of Council shall be elected, Reports (general and financial) submitted, and other business transacted.

9. A Member may introduce a friend to any Meeting of the Society—such friend not to be admitted more than twice during the Session.

10. The Secretary shall keep a Minute Book of the Society's Proceedings, and a Register of Members, and shall give in a Report at the Annual Meeting.

11. The Treasurer shall collect the subscriptions, take charge of the funds, and make payments therefrom under the direction of the Council, to whom he shall present an Annual Account, to be audited for submission at the Annual Meeting.

12. The Secretary shall at any time call a Special Meeting of the Society on receiving the instructions of the Council, or a requisition signed by Six Members.

13. The Society shall have the right to publish in whole or in part any paper read before it.

14. Members whose subscriptions are in arrears for nine months, and have received notice from the Treasurer, cease to be Members unless satisfactory reasons for non-payment be given to the Council.

15. Alterations of any Rule, or the addition of New Rules, shall only be made with the consent of three-fourths of the Members present at any Meeting, notice of the same having been given at the previous Monthly Meeting.

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