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AND

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OF THE

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Natural History & Antiquarian Society.

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PROCEEDINGS AND TRANSACTIONS

OF THE

DUMFRIESSHIRE AND GALLOWAY

NATURAL HISTORY & ANTIQUARIAN SOCIETY.

SESSION 1892-93.

7th October, 1892.

Rev. Wm. Andson, Vice-President, in the Chair.

New Members.—Miss Wallace and Miss Amy Wallace, Lochmaben. Sir Herbert E. Maxwell, Bart., M.P., was elected an Honorary Member.

Donations.—The Proceedings of the Society of Antiquaries of Scotland, 1891; Contributions to North American Ethnology, Vol. II. (two parts), and Vol. VI., presented by the United States Government; the Testimony of Tradition and the Journal of the Gypsy Lore Society, Vol. II., presented by Mr David MacRitchie, of Edinburgh; Bibliography of the Algonquin Languages (Smithsonian Institute); the Essex Naturalist, 1884-87; also, December, 1891-August, 1892; Report on the Pile-Structures in Naaman's Creek (Peabody Museum); the Belfast Naturalists' Field Club, 1891-92; the Proceedings of the Natural History Society of Glasgow, 1890; the World's Columbian Exposition at Chicago, 1893; Dr Sharp's Scheme of Old Age Pensions; list of Birds of Connecticut, prepared for the Bridgeport Scientific Society; the Transactions of the Canadian Institute, 1892; the Archæological Report of the Canadian Institute, 1891; an appeal to the Canadian Institute on the Rectification of Parliament; the Proceedings of the Rochester (New York) Academy of Science, 1891; Proceedings of the Nova Scotian Institute of Science, 1891; Index Armorial by A. D. Weld—French.

Secretary's Report.

The Secretary (Dr E. J. Chinnock) read the Annual Report :— There are now 184 members of the Society, of whom 24 are honorary and 7 life members. Eleven new members were elected during the year, and two new honorary members, Messrs E. G. Baker, of the Botanical Department, British Museum, and Serjeant Alexander M'Millan, of Newton-Stewart. Among the members who have been removed by death may be mentioned Dr John Aitken, Inverness ; Mr James Dairon, F.G.S., of Glasgow ; Major Herbert George Bowden, one of the Vice-Presidents of the Society ; and Mr Francis Maxwell of Gribton. Eight evening meetings and two field meetings have been held. At the former 26 papers were read, some of which were of permanent value, and all of which were interesting. Without disparaging the merit of other contributors, I think the communications of Messrs Andson, J. T. Johnstone, M'Andrew, J. R. Wilson, and Dr Grant Bey, of Cairo were specially worthy of notice. We are particularly rich in botanical contributions, and so long as we have such members as Messrs Bennett, Fingland, Johnstone, M'Andrew, and Scott-Elliot we need have little fear of botany being neglected. Meteorology is also well represented by the Rev. Wm. Andson. Other sciences lack representatives, and papers will be welcomed from any member who feels inclined to join our active circle. An interesting public lecture was delivered in November on Fish Culture by Mr Joseph J. Armistead, under the presidency of Sir Herbert Maxwell. The thanks of the Society are due to the librarian, Mr James Lennox, for his care of the books, to Mr James Davidson for arranging the specimens in the Museum, and to Mr G. F. Scott-Elliot for his exertions in relation to the Herbarium. During the session the first part of his "Flora of Dumfriesshire" made its appearance, and the second part will appear in company with the new volume of the "Transactions" in December. The funds of the Society do not admit of the purchase of portraits of Dumfries worthies just at present. Mr James Barbour could secure a considerable number of such portraits at once if the necessary funds were forthcoming. The field meeting in June to Newton-Stewart and that in September to Sanquhar and Crawick Water were very interesting and entertaining, but it is a pity that so few comparatively of our

members avail themselves of the privilege of attending these meetings. The bad weather unfortunately prevented the excursions in July and August from taking place. As the subscription is so small it is necessary, in order to insure the well-being of the Society, that the number of members should be large. It is a duty incumbent upon every member to try and induce others to join our ranks, if possible as active members, but if this is not practicable at any rate to shew their interest in the objects for which this Society exists by subscribing the small annual fee which is exacted from our ordinary members. I had the pleasure on behalf of the Society of receiving a large party of the members of the Carlisle Natural History Society, who paid a visit to Dumfries on Whit-Monday. Mr James Lennox kindly conducted the visitors over the town, and pointed out the various places and objects of interest, and Mr James Barbour conducted them over the ruins of Caerlaverock Castle. The members of the Carlisle Society hope to join this Society in some excursions in the not distant future.

Treasurer's Report.

The Treasurer (Mr John A. Moodie) read the Annual Report from the 1st October, 1891, to the 30th September, 1892 :—

CHARGE.

Balance in Treasurer's hands at close of last Account				£0	8 4½
Balance in Savings Bank at close of last Account				0	11 0
Subscriptions from 120 Members at 5s each	£30	0	0		
Subscriptions from 13 Members at 2s 6d	1	12	6		
				31	12 6
Entrance fees from 10 new Members				1	5 0
Arrears recovered from Members				0	15 0
Copies of Transactions sold				0	3 0
Interest on Bank Account				0	10 0
Donation from J.G.H.S.				3	0 0
Miscellaneous				0	0 6
Two Subscriptions in advance for next year ...				0	10 0
				£38	15 4½

DISCHARGE.

Paid Salary of Keeper of Rooms	£1	10	0
,, for Stationery, Printing, &c.	0	19	3
,, ,, Periodicals and Books	2	2	5
Carry forward... ...	£3	11	8

	Brought forward... ...	£3	11	8
Paid for Coals and Gas		0	4	2
,, Premium of Insurance...		0	4	6
,, Secretary's outlays and posts...		1	1	0
,, Treasurer's Do.		0	14	0
,, Expenses of calling Meetings as follows :—				
Post Cards £4 1 7				
Paid for addressing same at 1s per 100 ... ... 1 4 0				
Paid Robert Johnstone, Printer, printing same 1 0 0				
		6	5	7
,, John Grierson & Son, Joiners, for Botanical Cabinet		2	7	9
,, Account for printing Transactions for last year		21	0	0
,, Rent for Free St. George's Hall for Mr Armistead's Lecture...		1	0	0
,, Miscellaneous Accounts		0	8	0
		£37	16	8
Balance in Treasurer's hands ...		0	18	8½
		£38	15	4½

Dumfries, October 28th, 1892.—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*—Sir James Crichton-Browne, M.D., LL.D., F.R.S. ; *Vice-Presidents*—Rev. William Andson, Messrs Thomas M'Kie, George F. Scott-Elliot, and James G. H. Starke ; *Secretary*—Edward J. Chinnock, LL.D. ; *Treasurer*—Mr John A. Moodie ; *Librarian*—Mr James Lennox ; *Curator of Museum*—Mr James Davidson ; *Curator of the Herbarium*—Mr George F. Scott-Elliot ; *Members of the Council*—Messrs James Barbour, John Brown, Thomas Laing, Robert M'Glashan, Robert Murray, John Neilson, George H. Robb, Philip Sulley, James S. Thomson, and James Watt.

On the motion of Dr Chinnock, a very hearty vote of thanks was passed to Mr Richard Rimmer, Dalawoodie, the retiring President, for his services during the last four years.

4th November, 1892.

Mr James G. H. Starke, M.A., V.P., in the chair.

New Members.—Dr Samuel Brown, Victoria Road; the Rev. Robert M'Intosh, B.D., St. Alban's Villa; and Mr Robert M. Douglas, Alpin House.

Donations.—A copy of the History of Sanquhar, presented by the author, Mr James Brown; a copy of his work on Insecta, presented by the author, Dr David Sharp; the Essex Naturalist, September, 1892; Annals of the New York Academy of Science, December, 1891—May, 1892; Transactions of the New York Academy of Science, 1890-92; Notes on the Records of Scotch Plants for 1891, and the Nomenclature of Potamogetons, presented by the author, Mr Arthur Bennett; a specimen of a new British Alga, presented by Mr William Carruthers. This specimen was accompanied by the following letter from Mr Scott Elliot:—"Mr W. Carruthers, F.R.S., keeper of the Botanical Department, British Natural History Museum, has brought to my knowledge an Algal record which well deserves investigation at the hands of our Botanical Members. In 'Fleming's History of British Animals,' p. 515, Halimeda Opuntia is placed on record as British, with the following remark:—'I possess a specimen formerly belonging to the late Dr Walker, to which the following note was annexed in his own handwriting:—'Submarine plant from the rocks at Satterness in Kirkbane. An Bombycina. It covers the rocks with a close turf.'' It would be extremely interesting to know if it is really the case that this Alga exists in Kirkcudbright. It is not considered to be British—not growing, in fact, anywhere near the British Isles, though specimens, presumably borne by the Gulf stream, have been found, *e.g.*, between Torbay and Dublin, by Mr W. Todhunter (see Thompson's 'Additions to Fauna of Ireland,' p. 254). In Johnston's 'British Sponges,' p. 228, there is a figure of Dr Walker's specimen, which is unmistakably Halimeda Opuntia. The plant has been variously classed as a sponge, as a polype, and as an Alga, but it is now known to be one of the Coralline Algæ. I enclose a specimen kindly given to the Society by Mr Carruthers in order to aid in its identification. The plant is, however, bright green when alive."

Communications.

1. *Notes on the genus Orobanche in Scotland.*

By Mr Arthur Bennett, F.L.S.

The recent determination of a new species of Orobanche to Scotland (and to Great Britain) must be pleaded as the reason for these notes.

The whole genus is parasitical on other plants of widely different natural orders, and has its headquarters in the southern parts of Europe, thinning out rapidly as it approaches Scandinavia, in which one species, *O. Cirsii* (Fries.), occurs in West Gotland, the most northern station I know for any of the genus. *O. major*, *L*, occurs in Scania (the southermost pennine of Sweden), and in the province of Halland. It may be noted that *O. rubra*, Sm., a Scotch species, is extremely rare in Scandinavia.

Of the species that reach Scotland *O. rapum*, Thuil, occurs in Dumfriesshire, whence I have seen specimens gathered by Miss Witham. It also occurs in Kirkcudbright, but I have not seen a specimen. It has been reported from Fife and the Inner Hebrides, but *O. rubra* was perhaps the plant seen. It is also reported from Perth, but *O. rubra* is not recorded from that county, so that what the plant there intended may have been it is difficult to say; anyhow, its recorded place should be carefully searched.

O. minor, Sutton, is only recorded for Fifeshire by Dr Boswell. I should expect it in the three counties of Dumfries, Wigtown, and Kirkcudbright.

O. rubra, Smith.—The counties on record for this in Scotland are Wigtown (J. M'Andrew), Fife, Syme cat. That outlying portion of Argyle included in Westerness (W. Inverness) by Watson; whence I have specimens gathered by Mr Macvicar on the coast cliffs:—Main Argyle (Gourlie, Watson), Mid Ebudes, the middle isles of the Inner Ebudes (Watson), North Ebudes, the northern isles (Rev. E. Linton), West Ross, Outer Hebrides, whence it was reported by Macgillivary in 1830, but remained unnoticed until 1891, when it was gathered by Mr W. S. Duncan in the original station. *O. epithymum*, D.C., has been considered by some authors as the same plant, but it seems to me that it is a larger form of our usual plant, and *O. rubra* is placed as a variety of *epithymum* by Count Solms Laubach, the greatest living

authority on the genus. Taking the specimens I have seen, the Hebridean and Westerness specimens seem referable to *O. epithymum*, the other Scotch specimens to *O. rubra*. *O. rubra* has also been reported for Kirkcudbright by Mr J. M'Andrew. The English botany figure of *O. rubra*, t. 1011, is not good, and does not convey a good idea of the species.

Orobanche elatior (Sutton) reported from Argyle, but, I have little doubt, this intended the new plant I mention below. *O. elatior* is not clearly known north of north-east Yorkshire, and perhaps Lincoln, but the latter is very uncertain, and requires confirmation. In Europe *O. elatior* occurs in Denmark and North Germany, so there is no great improbability that it may be found in Southern Scotland; it grows on *Centaurea*, *Scabiosa*, *Knautia arvensis*, and perhaps *Cardnus lanceolatus*.

For some time I have had in my herbarium a specimen of *Orobanche* labelled as *O. elatior*, and localised from near Oban, Argyle. While seeing it was not *elatior*, I failed to make it out until this year, when dissecting its flowers. I found after careful comparison with specimens in the Kew Herbarium and the descriptions and plates in Reichenbach's Icones that it was *O. cruenta Bertoloni*, *O. gracilis*, Smith. This is a very interesting addition to our Flora. On what it grows in Argyle I am unable to say, but on the Continent it occurs on *Lathyrus pratensis*, *Lotus corniculatus*, *Genista tinctoria*, *Rubus*, and on many non-British species.

Of our species it is perhaps most like *O. rubra*, but differs in the form of the stem scales (leaves), the *corolla* form, and especially in the *calyx*, which is bifid, while in *O. rubra* it is entire and much longer (very rarely a small tooth on one side does occur in *rubra*); from *O. elatior* it differs in the sparsely flowered spike, the *calyx*, the anthers have no hairs, the filaments are not hairy in the middle, and the *corolla* is not constricted at the base, and the whole plant is less glandular hairy than in *O. elatior*.

It occurs under many names in European floras, most of them being probably only varieties, or forms induced by situation, the plants on which they grow, or by other local conditions.

I give a few of their names and its distribution :—*Orobanche cruenta*, Bertolini in Rar. it. pl. Dec. III. 56. *O. gracilis* (Smith),

Trans. Linn. Soc., Vol. IV., p. 672; *O. vulgaris* (Gaudin), Fl. Helv., Vol. IV., p. 176; *O. caryoplyllaceæ* (Schultz), Beitr. 8; *O. variegata* (Wallroth), Descrip. *Orobanche*, Figured in "Reichenbach's Plantae Critic," and in his "Icones Flora Germanicæ et Helvetiæ," Vol. XX., t. 700, p. 92 (1862). Portugal, Spain, France, Italy, Austria, Hungary, Bavaria, Montenegro, Bosnia, Bannat, Macedonia.

I hope Mr Macvicar will be enabled to find it next year, and to send me fresh specimens to figure in the Supplement to English Botany now in course of publication.

Dried specimens of *Orobanche* are very difficult to determine, and should any of the Members of the Club meet with any of the genus, I should be much obliged if they would transmit the specimens to me in the living state. If desired, I will gladly return them after examination, or I will send specimens of our Southern Species, as *O. caryopyllacea*, *pieridis*, *amethystea*, *elatior*, *cærulea*, &c., in exchange.

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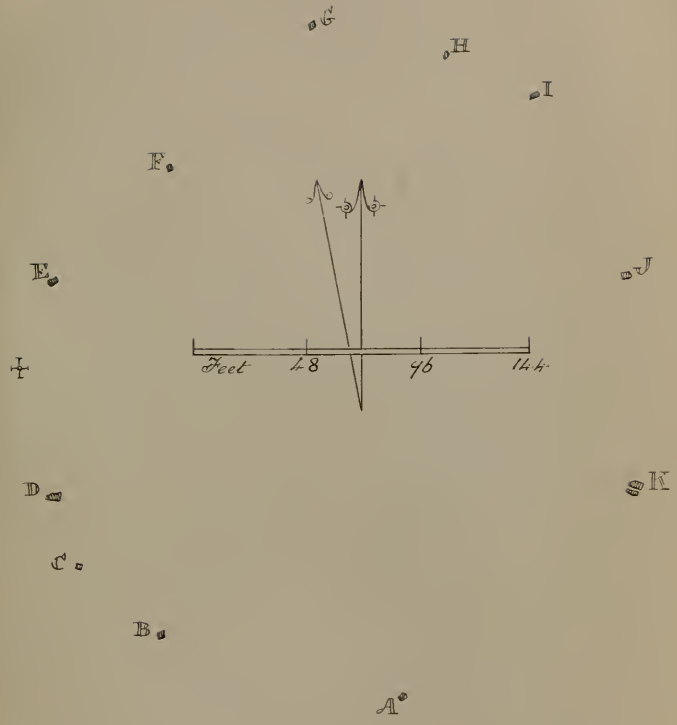
2. *Certain points in connection with Cup and Ring Marks.* By Mr Frederick R. Coles.

In the first rush of enthusiastic research into any subject of Antiquarian interest—more especially if we can mystify ourselves and others by a free use of the word Pre-Historic—we are all apt to be led into the natural condition of accepting certain elements as positive proofs of the problem we are trying to solve without giving the needful time, thought, and care which the magnitude of the problem demands. Such hastiness is developed perhaps more rapidly and ripens into rash theories more readily when Cup and Ring Marks form the problem than in any other matter. I freely admit having myself been bitten by the Cup and Ring Mark mania to a very sad and severe extent. Time, however, which cures all, has worked a little of the fever out of my Antiquarian ducts; and observations, made at cooler hours, have helped to show that many so-called Pre-Historic sculpturings once reputed to be the work of Archaic Man are really nothing but the curious result of many ages of Nature's handiwork. As the subject is really of more importance than might appear at the first glance, I shall, without further preface,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arraign the principal offenders, and endeavour to prove my position, that, in the three cases to be quoted, no trace whatever of man's tooling is visible. (1) We must go back some thirty years, and seek, in the pages of the Proceedings of the Society of Antiquaries of Scotland, session 1864, for the first curiously erroneous statement made by the late Sir J. Y. Simpson, who, in his exhaustive monograph on the Cup and Ring sculptures, when about to describe certain cup-hollows on one of the stones in Holywood circle, starts with the extraordinary fiction that "the circle is about 80 *feet* in diameter!" I need scarcely explain to an audience of Dumfriesians that the circle is, first of all, not a true circle, but an ellipse; and that its longest diameter is 97 yards, and its shortest 78 yards. With its extent, however, I am not at present concerned. Simpson proceeds to say that on the largest stone, about 10 feet long, which has fallen prostrate, there are about thirty cup marks on one end and the sides. Now, there are two stones "about ten feet long;" but the one Simpson indicates must be that on the S.-W. radius (D on diagram). It measures quite 10 feet 6 inches E. and W. and 7 feet 6 inches N. and S., and its height on the inner end is 5 feet—altogether the largest of the seven whinstones in the circle. There is little doubt that this stone was once erect, if so, it would have been exactly radially opposite stone J, which is at present the highest one. But, if it were ever erect, it must have been with its broad end on the ground and its slightly tapering end atop. Now, the odd fact is this, that nearly all the cup-hollows (claimed by Simpson as artificial) are to be found on this broad base! Even were this not the case, these hollows, to my mind, are not in the slightest way indicative of artificial cuttings; two, perhaps more, are very nearly circular, it is true; the majority are decidedly oval and sharpedged, and, instead of occurring in any symmetric group, however rude—and such grouping is one of the characteristic features of true cup marks, whether associated with rings or not—these hollows are at all sorts of irregular distances, and many of them very suspiciously confluent with the natural lines of cleavage in the rock.* Supposing, for a moment, these hollows on the end of this great stone were cut with an intention, we see that by its position they would be invisible

* The girth of this stone is fully 25 feet at its broad end, and only 17 or so at the other.

when the stone was erect. One can hardly credit man, whether of the 19th Century, the Middle Ages, or of Pre-Historic times, with such an abnegation of all sense and economy as to deliberately carve hollows on the under side of an earth-fast monolith! Further, as I hinted, there is another stone on the opposite arc of the circle, which measures 10 feet 3 inches. It also lies prostrate, but is a much flatter stone than the one just discussed. Its present upper surface bears many hollows, some of them quite as nearly circular, though not so deep as the first noticed. Why were these not claimed by Sir James as also artificial? I do not pretend to answer that query. Again, in the same monograph, the author refers to a group of three or four stones lying within the circumference, which, he thinks, may be the fallen remains of a "cromlech." In the attempt to elucidate the facts regarding the position of the stones, I have been at some pains, in conjunction with my friend Mr Rutherford, to draw an accurate plan, which, when finished, I compared with the plan made by the Ordnance Survey to the 25″ scale many years ago. The only significant difference is that the O. map shows twelve stones, while, as every one knows, there have been but a eleven for a very long period. In the time of Captain Grose, a plan was made in 1789. It shows twelve stones. I have marked the position of this stone by a X at a point between stones D and E in my plan. This space, however, is blank in the O. map, and its "twelfth stone" is shown at a point some 40 feet N.-W. of stone F. It is almost incredible but perfectly true that this mark on the map, indicating the site of the stone, is an entire blunder, owing to a fault in the zincography! This rather startling information was the result of enquiries I made through a friend, an officer of the Survey Department.

Now, Simpson's supposed "fallen cromlech" is represented in Grose's plan by three separate stones, and in my plan by two—those at K. There is a third, and apparently a very large stone, slightly to the east of these stones, nearly covered by earth. Whether the middle stone of the group ever rested as a capstone upon the other two, and so formed what some are pleased to call a "cromlech," we cannot now affirm. A little digging below these stones might be productive of good results.

One point, however, is quite certain—the so-called "Cup Marks" on the two protruding stones of this group (at K) no

more come under the category of artificial handiwork than do the cup hollows on stone D. They are either pure weatherings, or possibly, relics of some footmarks of Pre-Adamite beast.

Stone F is the only stone in all the *Twelve Apostles* that bears undoubtedly human toolmarks on it. These occur on its perpendicular long side facing N.-E., and consist of three deep narrow wedge-shaped holes in one row about 16 inches apart, and another similar hole higher up, near the right hand of the stone. These holes were, I believe, bored by some vandal who had set his heart upon splitting up the block to build a dyke; but the thunders of Thorr broke on his head, and the stone was left.

Concerning the other two localities, as I think quite wrongly and unjustifiably raised to the distinction of possessing human handiwork, it is worthy of note that to each of them there is appended a tradition. Which is the more ridiculous it would be hard to say. (2) The "Cow Cloot" in the parish of Parton is the more heinous offender. Here again, but indirectly, Sir James Simpson's monograph has to bear the brunt of a critical examination. He refers to observations made by the Rev. Mr Greenwell. "Appearances of artifical stone-cutting which he believes to be referable to the class described in this memoir. They consist of three or four Cup Hollows of the usual form and size, and a slanting ovoid circle, not unlike that which a cow's foot produces in softish soil." These marks which, I submit, are nothing but weatherings, and, even as such, not of any markedly peculiar form, or depth, or mimicry of artificial work—have been unduly honoured by a page of illustration by my friend Mr Harper in his excellent "Rambles in Galloway"; but, I am glad to state that in conversation he admits that the whole matter was not worth the time and trouble given to it. The legend ascribed to this most inconspicuous and disappointing rock-site is as follows:—"The proprietor [of Upper Arvie], in order to get up arrears of rent 'drove the pun," or, in other words, carried off the hypothecated stock, while a fierce resistance was made by the people, and that over this stone, on which a man had just been praying for relief against his enemies, the cattle passed, followed by an officer on horseback, and that it remains as a memorial to posterity of the cruel deed." The writer of the above could, in his day, recognise not only the four nails on each side of the horse-shoe impression, but the knot of the garter made by the kneeling man! (3) In

Kelton, at a certain point in the march-dike fencing the moor from the arable ground on Hartburn, there is a stone which forms the first step of what is known as the "Chapman's (or Packman's) Stile." The story runs that a certain packman, after committing a murder near this spot, fled, and, in scrambling over the dyke, left the impression of his blood-stained foot here on this stone. The origin of so particularly funny a myth seems to lie in the fact that the shape and size of this weathered hole are exactly those of a good-sized foot or boot—one would be inclined to say of a very much-down-at-heel boot, since the upper portion of the sole is square-edged, while the heelmark is a nearly circular and very deep hollow — the whole purely natural. I had been led to believe, and that by no less good observers than Mr Hornel and the late Mr Hamilton of Ardendee that this was a genuine Cup Mark connected with genuine carved grooves running off at either side and crossed at the end—the toes of the boot—by another groove. I am very certain, however, that had this stone not come under notice during our early petroglyphic mania, no such interpretation would have been placed upon it. Probably the knowledge of the legend led our friends to fit the boot to the story, or the facts to the boot. The general conclusions to be drawn from the above remarks may thus be summarised. (*a*) Have no regard for cup hollows when found alone unaccompanied by rings, unless they occur in a symmetric grouping. (*b*) Always doubt cup hollows in proportion to their depth; genuine cups are apt to be very shallow when found on exposed rocks, and if on rocks from which turf has been removed, their hollows usually show clear tool marks. (*c*) Doubt more especially any site to which a legend or tradition attaches. To none of the sites of genuine Cup and Ring Marks anywhere, so far as I know, the wide world over, is there one scrap of tradition appended. (*d*) Do not take for granted statements regarding the occurrence of Cup and Ring Marks until, *first*, you are reasonably convinced of the accuracy of the writer; *second*, of the nature of the rock where the marks are said to be found; and *third*, of the genuineness of the cuttings by your own repeated personal observation and careful scrutiny.

N.B.—Since a somewhat heated discussion, started on a mistaken view of my stand-point, took place when the above paper was read, I should like it to be clearly understood that the paper is not to be taken as a monograph on Holywood Circle, but as the expression of my opinion on the "Cup Marks" there.—F.R.C.

3. *Kirns in Scotland.*

By Mr James G. Hamilton-Starke, M.A., F.S.A.

The ingathering of harvest has been an occasion for rejoicing among all nations since the most primitive times. As the customs of the Jews are the oldest of which we have an authentic record, we find in the Old Testament that among their festivals there were two connected with the harvest season—the grain harvest (first of barley and a little later of corn), ending sometime between April and June; and the vine harvest in October. The pagan nations of Greece and Rome held similar festivals; but these were revels, without any expression of gratitude to the Divine ruler of the universe. The early Christians, who held these festivals with a religious observance, when taunted by the heathen as to the newness of their scriptural customs, retorted that they were to be found in the "writings of Moses." In the Pentateuch we find the Divine command for harvest feasts, which were to be proclaimed as holy meetings; and the contrast between these and pagan ones is thus well put by Dean Milman in his history of the Jews. "The third of these feasts took place in autumn at the end of the vintage in all southern climes, the great time of rejoicing and merriment. If more exquisite music and more graceful dances accompanied the gathering in of the grapes on the banks of the Cephisus, the tabret, the viol, and the harp which sounded among the vineyards of Hebron were not wanting in sweetness and gaiety; and instead of the frantic riot of Satyrs and Bacchanals the rejoicing was chastened by the solemn religious recollections with which it was associated in a manner remarkably pleasing and picturesque." This religious element is strikingly brought out in the Book of Ruth, where the operations in the field at barley harvest are fully and beautifully described. We see the wealthy and religious Boaz as he enters the harvest field say to his reapers, "The Lord be with you," and their reply "The Lord bless thee." After the interchange of this devout salutation he inquired of his headman who superintended the reapers—young men and maidens—Who is this damsel? And on learning Ruth's name and errand he gave orders that some of the grain should be pulled out of the sheaves, so that she might "without any rebuke" get more than the other gleaners, and she was allowed to glean until both the

barley and the wheat harvest were ended. Then after the grain had been carried in and winnowed on the threshing floor we are told that Boaz "ate, drank, and was merry." It would not, however, be doing full justice to the Greeks were I to omit mention of the beautiful description given by Homer of the wheat and vine harvests, as these two scenes were engraven upon the shield of Achilles, two scenes which rival Hebrew usages. I here give Cowper's translation of the wheat harvest scene :—

> There, too, he formed the likeness of a field
> Crowded with corn, in which the reapers toiled,
> Each with a sharp-toothed sickle in his hand ;
> Along the furrow here the harvest fell,
> In frequent handfuls there they bind the sheaves.
> Three binders of the sheaves their sultry task
> All plied industrious, and behind them boys
> Attended, filling with the corn their arms,
> And off'ring still their bundles to be bound.
> Amid them, staff in hand, the master stood,
> Enjoying mute the order of the field ;
> While shaded by an oak apart his train
> Prepared the banquet—a well-thriven ox
> New slain, and the attendant maidens mixed
> Large supper for the hinds of whitest flour.

There is here no mention of that charitable Hebrew custom of gleaning which was enjoined by the Mosaic law, and has been observed since then to the present as an equitable claim by the poor. In mediæval times the religious element of offering the first fruits of harvest to God lost its original simplicity, and became so laden with superstitious ceremonies that it resembled a pagan rather than a Christian festival. Hence the religious element fell into disuse at the Reformation ; and it is only within the last few years, especially in Scotland, that religious services have been held as an accessory to harvest festivities. The "kirn" in Scotland corresponds to the harvest home in England. It is the Scotch way of pronouncing the word churn, just as church is pronounced kirk ; much, meikle ; such like, sic-lyke or sicken. In the north of England it is called the mell-supper, which some English antiquaries suppose to be a corruption for meal, and that the Scotch is a corruption of the word corn. I have never heard the word corn pronounced kirn ; and in regard to the word mell, the explanation given by Brand and adopted by Strutt in his

"Sports and Pastimes" is the probable one—that it means the promiscuous mingling of master and servants at the same table. Strutt adds—"Probably the mell and the churn supper originated from the Jewish Feast of Tabernacles." The association of a kirn with churning arose from the circumstance that there was always a churning in a farm house before any large supper, in order to provide "Cream crowdie," *i.e.*, cream with oatmeal. There was generally a family tea in the house before the supper in the barn, so that its inmates might give their whole attention to the guests at the kirn. The farmer, also, always paid his harvesters their wages before the kirn began, so that they might have their minds more free for enjoyment. The kirn was generally held some days before Hallowe'en, but, as the poet Burns has recorded, it sometimes took place that night in consequence of a late harvest.

Ae hairst afore the Sherra-Moor,
I mind as weel's yestreen ;
I was a gilpey then—I'm sure
I wasna past fifteen.

The simmer had been cauld an' wat,
An' stuff was unco green,
But aye a rantin kirn we gat,
An' just on Hallowe'en
It fell that nicht.

Sir Walter Scott mentions that he regularly attended the kirns of his neighbour, "Laird Nippy," and that he always himself gave a kirn, which Lockhart thus describes. "Every November before quitting the country for Edinburgh Sir Walter gave a harvest-home on the most approved model of former days to all the peasantry on his estate, their friends and kindred, and as many poor neighbours as his barn could hold. Here old and young danced from sunset to sunrise—John of Skye's bagpipe being relieved at intervals by the violin of some 'Wandering Willie'—and the laird and all his family were present during the early part of the evening, he and his wife to distribute the contents of the first tub of whisky punch, and his young people to take their due share in the endless reels and hornpipes of the earthen floor." It was the custom in Scotland towards the end of the reaping to leave a small sheave standing—called the maiden

—at which the harvesters from a distance aimed their hooks, and whoever was skilful enough to cut it, he or she wore a bit of it on their person and led off in the dance at the kirn. The rest was hung up in the farm house until next harvest. The "huik," or hand sickle, has been long ago superseded by reaping machines. It was a short sharp curved instrument similar to what is represented as having been used in the east from the earliest times. The supper and dance were held in the barn, round the sides of which were placed deal boards supported on barrels or other trestles. Supper was laid out on a centre table laden with substantial viands, also whisky, home-brewed beer, and cream crowdie. Dancing was carried on until daybreak, and the barn door always stood wide open. The barn was lighted up with thick dip candles made for the occasion by dipping wick into the melted tallow that had been accumulated in the farmhouse. An itinerant fiddler, and sometimes the bagpipes, furnished music, and the dances were chiefly reels and country dances. Songs were given at intervals, and when daybreak appeared all parted wishing to the master that he might live to see "mony mae sic merry kirns."

To "Auld Lang Syne" they tune their voice,
Sae noo the kirn is ended;
The courtship tiffs that hae been broke,
By wedlock will be mended.
Ower Criffel hill the mune has sunk,
Sae aff tae bed they've started,
Where lads will dream of kirns to come,
And lassies—kirns departed.

W. Taylor.

Kirns were held all over Scotland 40 years ago, but have been gradually dwindling away, until now in many rural districts they are known only by hearsay, and the barns have been gradually demolished.

N.B.—The English word *churn* is of Scandinavian origin, for which the Dutch and Germans have *kernen*, the Icelandic *kirna*, the Swedish *kärna*, the Danish *kierne*. The Scotch *kirn* is the original way of spelling the English *churn*.—Editor.

2nd December, 1892.

Mr George F. Scott-Elliot, M.A., Vice-President, in the Chair.

Donations.—The Essex Naturalist for October, 1892; a list of Californian Plants, made by Dr A. Davidson, presented through Mr Fingland, Thornhill. Dr Chinnock, Secretary of the M'Dowall Memorial Committee, presented to the Society the Minute Book of that Committee.

Communications.

1. *The Influence of Insects on Flowers.*

By Mr G. F. Scott-Elliot, B.Sc., F.L.S.

One must remember, in order to realise the influence of insects on flowers, that our present Flora is the result of long-continued selection and development. In primeval times the number of species was extremely small, as compared with the present, and those which did exist were of a simple generalised type, and frequented by hordes of miscellaneous insects, none of which displayed the specialised tastes and complex organs of our nineteenth century ones. *Now* the number of species, both of flowers and insects, is extraordinary, and many show the widest and most varied specialisations. Specialisation is, however, not by any means invariably found at the present day. Thus there are many flowers, like the gowan and daisy, which are common and widely spread, and depend on crowds of insects of all kinds; and alongside these we also find highly specialised plants, like the fig, which depends for its very existence on one particular kind of moth, and these latter highly specialised forms are comparatively rare. Now, in what way did insects exercise their influence, if any? On this point there is so much confusion that one must go to the very beginnings of the theory. Evolution is brought about by variations. Flowers at the tip of the spike are yellow, those just open are a bright rose red, while the older fading flowers are mauve or purple. One sees, therefore, that the flowers of this plant pass through the whole or nearly the whole series of colours which one finds in the vegetable world. There is no certainty as to the cause which produces this change of colour in flowers, but there are some grounds for supposing that

direct sunlight may have led to variation in this direction ; there is also a considerable probability that a blue or red colour is expensive, requiring the expenditure of a certain amount of energy. However colour change started, there is no doubt that insects have exercised enormous influence on its further development. Both birds and every group of insects have distinct preferences for certain colours. This is least clearly obvious in the case of beetles, flies, and perhaps the smaller bees, which do not seem to be more attracted by bright colours than they are by yellow or white. Bees distinctly prefer red, and particularly delight in the full purple colour of the bugle and *Vicia Cracca*. Butterflies appear to like anything bright and vivid, but the common cabbage white butterflies seem to me to prefer their own colour (white) to anything else. Humming-birds have a distinct and special love for a peculiar shade of red, which is not found in any of our British plants. This shade, and a shape corresponding to the long curved beak and head of these birds, is however fairly common wherever they exist in large numbers. Thus I have found members of such utterly different orders as *Leguminosæ*, *Rubiaceæ*, *Scrophulariaceæ*, *Labiatæ*, *Tridaceæ*, and the Indian Shot taking on this shape and colour, and in most cases proved that they were visited by birds.

The effect of the artistic preferences of bees is, however, clearly traceable in our own wild flowers. Thus *Geranium pratense* is a deep purple, and its large flowers are visited chiefly by the larger bumble-bees ; *Geranium silvaticum* has smaller purple flowers, and is also visited by the large bumble-bees, though it is also frequented by numbers of small bees and the higher classes of flies ; *G. sanguineum* is not so distinctly purple, and has an even more mixed clientèle ; our other forms—*G. molle*, *G. Robertianum*, and *G. dissectum* have pink flowers of a much smaller size, and appear to be almost entirely dependent on very small bees and flies of the upper and lower classes. Along with this difference of colour there is in the various species a different arrangement of stamens and peculiar methods of ripening, by which each form is thoroughly suited to its main class of visitors. Now, let us consider the *Labiate* family. We have *Salvia pratensis* and the common bugle, which are purple, while the Woundwort, *Stachys silvaticus*, is a strong red, and Wild Thyme is pink, not to speak of *Lamium album*, which is white. Why should there be this

variety? If one watches the common bugle on a warm, quiet day one can, I think, answer the question. Usually one has not to wait long before one sees a furry, chestnut-coloured bumble (*Bombus muscorum*) flying back and forwards in wide sweeps, much as a pointer ranges a field of turnips for partridges. Suddenly she will catch sight of a bugle, and immediately fly straight to it, busily probing every flower on the spike with an excited and affectionate hum. One sees at once that the bugle, which is a small plant with a way of growing scattered in single specimens, often in broken ground, requires a conspicuous, easily distinguished colour. The blue *Salvia pratensis* is also a bumble-bee flower; on the other hand, several South American *Salvias* have a rich red colour, and a shape suited to the humming birds, which are known to visit them. *Stachys* has a habit of growing in masses, and is a strong red suited to the taste of another *Bombus* which visits it frequently. Thyme, on the other hand, is partly visited by the hive-bee, and partly by various flies, and its strong scent enables it to do without such a deep and expensive red as one finds in *Stachys*. I have never studied *Lamium album* in the field, but as I found it in full bloom as late as October 30th, I am inclined to think it is visited by flies as well as by bumbles; in any case, it is a very conspicuous plant, and easily seen by bees. Our violets also show the advantage to a plant which grows in scattered specimens of a colour conspicuous enough to attract a bumble-bee flying, as they often do, at a rate of ten to twenty miles an hour. It is true that the mountain violet (*V. lutea*) is yellow, but then this plant is commonly found on bare hillsides, where it has few competitors, and is quite sufficiently conspicuous. The blue variety (*amoena*) is also common, proving that *V. lutea* is a variety or incipient species. Again, in the pink order, most of our English forms are white, but *Sagina procumbens* (Pearlwort) has no petals, as a rule, while *Lychnis diurna* and the Ragged Robin are pink. I have found this summer that the Pearlwort is visited chiefly by ants, and it is also no doubt largely self-fertilised, hence we may see how it can do without petals. Again, the Day Campion and Ragged Robin are visited almost entirely by bumble-bees. The difference between *Lychnis diurna* and *Lychnis vespertina* is perhaps the best possible instance of the way in which insects may have brought about a multiplication of species. *L. vespertina* has

white flowers, which are scented, and mostly open during the evening. Now, the common ancestor of the two species may have had red flowers, but with a tendency (by reversion to still earlier conditions) to produce white flowers occasionally, just as we see happens with *Lychnis flosculi* in our own district. This tendency would probably be most frequent in those flowers which open towards evening through the absence of strong sunlight, and such white, late opening flowers would be best visible to evening moths, and be frequently crossed between themselves. The red day flowers of *diurna* would be visited, as now, by bumble-bees, which retire to rest before the evening moths come out, and hence the flowers of each incipient variety would be constantly crossed with each other, and but seldom with those of the other variety. White colour, late hours, and scent being all directly of service to moth flowers, would be fixed by natural selection, and the two incipient species would diverge more and more widely, and have room to produce the other very minor distinctions which now separate them. Again, why should *Lepigonum* or *Spergularia rubra* be pink? It is most unusual in the section of *Caryophyllea* to which it belongs, and I could not have answered this question before this summer. I now find it is visited not infrequently by hive-bees, and the pink is obviously to assist it against the strong competition of *Armeria vulgaris*, which often accompanies it. One must, however, be careful not to apply the principle too universally. Most flowers cannot rely entirely on one class of visitors, and though Sir John Lubbock has sufficiently proved by direct experiment that bees do prefer red to yellow and blue to red, still they do not by any means confine their attention to red and blue flowers. Thus the hive-bee visits the common yellow buttercup, and bumble-bees often gather pollen from St. John's Wort and the Willows in early spring. None of these three plants are of course specially given up to bees. Even in cases like that of *Lamium album*, one must remember that one has mainly to explain why some flowers have turned red or purple; it is not necessary to suppose that all bee-flowers must do so, as they may use their surplus material in other ways.

Everyone knows that one of the great subdivisions of botany is that of *Corolliflorae*—flowers, that is to say, in which the petals are united to form a corolla. I think, however, few can have

realised that we are probably indebted to insects for the existence of this particularly beautiful group. It seems to me difficult to find any other reason for *Corolliflors* than their being able to reserve their honey for longlipped insects, which also happen to be the most intelligent and industrious pollen carriers. In other ways a tubular flower is a disadvantage, as material is needlessly wasted in the tube itself in the strong supporting calyx and so on. One might even, I think, trace the variation which led to the formation of tubular flowers a little further back ; the petals in a minute forming flower consist of four or five small pimples of jelly-like substance which are arranged in a circle. If these little bulging pimples were arranged closely side by side, they would be likely to run together and rise as a single rim or cylinder instead of as separate projections. If this is true, it explains why *lychnis* and *silene* which are tubular flowers, from an insect's point of view, are not *Corolliflorœ*, for we find in these forms that the position of the stamens and nectaries would prevent this fusion. At any rate, when a tube of this kind was once produced even in a rudimentary condition (such as we find in the holly and bryony), the advantage in retaining the honey and preserving it for the best insects would be so great that it would be immediately seized upon and improved.

A possibility of indefinite variation was thus afforded, and the variations that actually have occurred are so numerous that it is somewhat difficult to classify them. I think one may, however, trace three distinct types, under which probably 90 per cent. of the *Corolliflorœ* may be placed :—

1. Flowers with a widely open corolla very much like a large *Thalamiflor* whose petals have united—*Campanula*, *Convolvulus*, and the *Foxglove*.

2. Flowers with a very narrow tube which ends in a spreading horizontal limb—*Primrose*, *Periwinkle*.

3. Flowers with distinct upper and lower lip and a short or moderately long tube—*Lobelia*, *Salvia*, and almost all the *Labiates*.

Now every one of these very widely spread types can, I think, be shown to be directly adapted to the shape of the insects which visit them. Thus a Foxglove is almost exactly the shape of a bumble bee's body, and I think we are quite justified in saying that the bee has fashioned the shape of the Foxglove flower exactly as the thumb of an old glove affords the exact pattern of

its wearer's digits. In this first type, in fact, the insects are intended to enter the flower bodily, and the shape of the flower depends upon the size and the usual motions of the insects which enter. Generally speaking, however, this adaptation is not so striking at first sight, because the insects may enter the flower in any direction, and hence its shape will not be that of a bee, but that of a *bee's body of revolution* so to speak. This can be easily seen if one takes a Bluebell and cuts it into two equal halves, when the space in each half between the corolla and the upright median style will be seen to be very nearly that of a bee's head and tongue. A very striking instance, which at first sight seems contradictory, is that of the Pigwort. This is visited by wasps which in entering bend their bodies into a circle, resting the thorax on the lower lip of the corolla (just as an athlete rests on his waist when about to turn a circle on the horizontal bar), and the shape of the globular corolla is just such as will enable the head of the wasp to accomplish this movement.

The *second* or *Primrose* shape is one not often found in British plants, though it occurs *e.g.* in Forget-me-not. It is typical of flowers which depend mainly on moths and butterflies for carrying their pollen—these insects have an extremely long, thin proboscis, and are unable, from the size of their wings, to enter flowers like a bee, hence they stand on the spreading limbs of a Primrose and plunge their delicate elastic trunks down the narrow tube. In our Flora the Honeysuckle is perhaps the best example of a moth flower, and it has the characteristic long and narrow tube, but it is only in tropical countries, where butterflies are numerous and important enough to be consulted, that flowers of this type reach their full development. In such places there are Rubiaceæ and plants of the Periwinkle order which have tubes four or five inches long, and not nearly a quarter of an inch in diameter.

In the third or *Labiate* and *Eyebright* type, the insect, usually a bee, is supposed to stand on the lower lip and thrust his mouth and lips down a tube; the length of this tube varies greatly, and often shows the most exact agreement with the measured length of the particular bee's trunk. The size and character of the corolla lips varies also enormously. Sometimes, as in *Lamium*, the bee stands comfortably on a broad platform and pushes his head and lips down a long corridor, which ends in a cup of honey, and is often guarded from intruders by a curtain of stiff hairs at

the door. In the Thyme he is supposed to stand on the other flowers, and only his head enters the corolla. In Veronica the lower lip has been suppressed, and the insect is supposed to alight on the style and two spreading stamens.

In all three types, however, if one examines the flower, as compared with the insect, one sees that the shape of the corolla is an almost exact generalised outline of its average visitor's head and mouth parts, affording, of course, play to the ordinary motions on entering or leaving of the latter. Natural selection seems to have ruthlessly pared away any exuberance of shape, until the correspondence is sometimes astonishingly correct.

Another striking effect of insect visitors is shown in the development of nectaries to secrete the honey. In this case the origin of nectaries may very likely be found in insect visits. Primæval insects probably bit and gnawed the flower parts, and possibly the places most affected by them would be the juicy succulent tissues at the base of the stamens and petals. That is the most usual position of nectaries, and a part often attacked by the gnawing beetles now living. A stimulus of this kind would produce a flow of sugar to the part attacked (one can see a similar flow giving rise to abnormal development in the galls produced by insect injury at present). At first this abnormal supply must have been purely irregular, but gradually the flower took to developing regular spots, where a constant exudation took place, and which the insect could readily find. Once this took place one can see both how insects began to develop a sucking mouth, instead of strong biting mandibles, and how the nectaries became gradually more and more definite and constant. In fact, every stage of transition can be almost traced from our present forms. Thus Müller has shown in his "Fertilisation of Plants" a regular series of transitions, from the biting mouths of the sand-wasp and *Prosapis* to the complicated purely sucking mouths of *Bombus* and the hive-bee. On the flower side, I was interested this summer by seeing a very small Erupis fly, which was obviously sucking on the petals of *Hypericum perforatum*, whose flowers show no trace of nectaries, and which are not known to secrete honey. I was compelled to believe that exudation of honey did take place, though in an irregular and unlocalised way, probably as may have been the case with the earliest flowers. Before leaving nectaries, I must point out that their

formation involves a loss to the flower which is usually made up by suppression of other parts. In *Cruciferæ* there are, for instance, only six stamens, but a close study of the flowers renders it probable that the six nectaries are remains of six other stamens which are required to make up the symmetry of the flower. Generally a direct connection between nectaries and missing parts cannot be traced, but well-developed nectaries, as in the higher *Corollifloræ*, usually go along with great reduction in stamens and carpels. One has only to compare the numerous stamens and carpels of buttercups, roses, and mallows with the four or two stamens and two carpels of most *Corollifloræ* to see this clearly.

Very often a regular nectary leads to a kind of bag being formed to hold the honey secreted. A rudimentary cup of this kind occurs in the pouched sepals of some Cruciferæ; here it has probably been formed by the impression of the nectaries which in the buds occupy the part of the sepals afterwards pouched, and the cavity thus formed being useful as a honey receptacle, has been maintained and improved by selection. In other cases one is disposed to think that insects have directly started a variation of this kind. Thus some buttercups are very near the St. John's Wort in being without any particular spot at which honey is secreted. In the common butter cup, however, exudation of honey is confined to a particular shallow pit just at the base of the petal. If one compares this shallow cavity with a Columbine petal, one can scarcely resist the conclusion that the constant pushing and probing of insects has deepened and elongated this shallow pit till it has come to form the long curved spur of the Columbine. The lengthening of this pit may have gone on for centuries, but as every little increase was of advantage both to flower and insect it seems very possible that it has been produced in this way. Quite similar pits or spurs are found in the Toadflax Butterwort and in violets, and similar structures are extremely common in the orchid family. One orchid, *Angræcum sesquipedale*, has a spur of this kind eighteen inches long, which is adapted to a kind of hawk moth which has a proboscis about the same length.

There would be no difficulty in multiplying instances to show the influence of insect visitors. I shall, however, forbear to try the patience of members any longer, only pointing out what is

perhaps the most important point of all. The differences between two allied species may be of a minute and scarcely visible character, and yet if those differences lead to the flowers being visited by utterly different insects, these two species are as much isolated from one another as if the broad Atlantic rolled between them. Mutual crossing is impossible, and each species is perfectly free to follow any line of variation which it chooses. Isolation of this kind is, as we can see from the study of island farms, a most fruitful cause of new species. Hence the importance of a study of insect visitors is enormous, and it is astonishing to find that whilst there are probably several hundred botanists who can name any British plant presented to them, practically nothing has been done in this direction.

Unfortunately, every little detail requires the most tedious and exasperating work in the field, and the habits and customs of our bees and flies have been even less studied than those of our plants. Any of our members who begin this branch will, however, find a field almost untrodden, and, however, superficial the instances given may be, I hope some may be induced to undertake this most fascinating yet bewildering and difficult branch of botany. In this hope, I recommend them to begin with a careful study of Herbert Spencer, that they may be delivered from the haunting fear of Weismannism, which has long been dead and buried on the Continent, but occasionally returns in this country to life. I must also recommend them to study Müller's "Fertilisation of Plants," and to read carefully and critically Professor Henslow's "Floral Structures." They will find that I am very deeply indebted to all these authors, and to Mr Grant Allen for the theoretical part of this paper.

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2. *Trade Tokens.*

By Mr Philip Sulley, F.R.Hist.S.

Mr Sulley in the first place made some general remarks regarding trade tokens, pointing out that while the whole coinage on record from Anglo-Saxon times to the present did not exceed a thousand different specimens, the trade tokens issued at various times exceeded sixty thousand. The cause of the issue of such

tokens was the lack of small change. He directed attention to a penny of the time of Edward I. in England and John Balliol in Scotland, which was purely the working-man's coin of the day, and represented his day's wage during many a score of years. It was the only coin they had, and to get what was proportionately a half-penny and farthing they broke the penny piece into halves and quarters. For three centuries this state of affairs existed, until Henry VII. made a great reform in the coinage, and he was the first king to put a likeness on coins. Then came Edward the Sixth and Mary the Evil, who issued most base and degraded coins, the result of which was that tradesmen refused to put up with them any longer. Soon the chandler, the grocer, the baker, the vintner, and other trades people, along with many of the principal households, began to issue tokens of their own to be used among their own friends, within their own circle, and in their own town. These they made of all kinds of metal—a few of copper, many of tin and pewter, some of brass, and some even were of leather—stamped. Matters went on in this way till James the Sixth of Scotland journeyed across the Border to become the First of England, the tokens having continually increased. His Blessed Majesty, James, when he went south found he could not take his Scottish "bawbee" with him. As towns like Bristol, Worcester, and Oxford were issuing these copper coins at fair value, and were making an immense profit out of it, he, with Scottish ingenuity, thought he might turn a good trade at it too, and he gave a patent to Lord Harrington in 1613 to issue "good copper farthings." As a matter of fact, they were worth about a fifth of that sum, and consequently his lordship made something like £30,000 a year out of the business. James, however, soon did away with the patent, and gave Lord Harrington some thousands a year to carry on the trade while he himself secured the profits. From 1618 to 1689 the issue of tokens was widespread, and their mottoes were numerous. In 1671 King Charles II. reformed the coinage by the issue of honest copper pennies and farthings, and in the following year he issued an edict putting a stop to the circulation of trade tokens, and succeeded in suppressing them. William III. and Mary, Anne, George I., George II., George III., all managed to supply the requirements of the public substantially for about 100 years. But then there came a dearth of money, and in

the year 1787 things got so bad that there was no money to pay wages, &c. In that year the Anglesey Copper Company issued copper pennies and farthings to their work-people, and these were so much in demand that in the course of three years they struck 300 tons of the metal. The result was that other people took up the same trade, and these tokens grew to an enormous extent. Ten years afterwards, in the year 1797, George III. put a stop to the business by issuing a very beautiful, though rather cumbersome, twopenny piece of solid copper. That put a substantial check on copper tokens, so much so that they died out about the year 1800; and in 1802 there were only two issued. In 1806 a new penny of good value came from the mint.

Mr Sulley proceeded to give particulars of some of the tokens issued at the end of last century. Some were put into circulation by towns, others by private speculators, who adorned theirs with figures of noted persons such as the Prince of Wales, Earl Howe, Nelson, and the Duke of Wellington, while classical subjects also came within their artistic scope. Tokens were likewise issued as advertisements. A celebrated London dwarf, who was on exhibition, had his halfpenny; a menagerie was not behind the times with a coin on which were the kangaroo, armadillo, and rhinoceros; an acrobatic performance had its suitable advertisement; the proprietors of a great lottery followed in line; and another token was issued as an advertisement to a stage coach establishment, with words in praise of Palmer, the founder of stage coaches. Mr Sulley exhibited specimens of these, and among others a Masonic half-penny. A magnificent set of tokens was issued at one time with representations of the principal London buildings. A more remarkable set altogether were the satirical tokens. One Spence, who had seen the inside of a prison five times, and was three times tried for high treason, issued a notable series of the kind in question, and Mr Sulley brought before the meeting specimens, along with others circulated by T. Hardy, tried for high treason in 1794; J. H. Young Erskine, the great advocate; Gibb; and the London Corresponding Society, which was the means of stirring up some notable riots in the English Metropolis. Such tokens, which were circulated in great numbers, were, of course, issued for political objects. The French

Revolution brought a host into circulation, and numbers were struck in honour of the victories of the British arms. In the ten years succeeding 1787 no fewer than 40,000 were put into circulation. In 1811 copper had grown so valuable owing to the great wars that twopenny pieces were worth fivepence, and a large number of silver tokens were issued for the first time in that year. On 17th July, 1817, however, an Act was passed compelling their withdrawal, and that was the end of the system of tokens. In the first period, up to the time of Charles II., there were upwards of 20,000 issued, of which 12,000 were known at the present time, and 40,000 were known to have seen the light from 1787 to 1817. A good many more had doubtless been lost. And the cause of all this was simply the scarcity of change! Coming to Scotland, he found it a very extraordinary thing that, as far as he could ascertain, there was no collection of Scotch trade tokens, or record of them. In the great antiquarian museum in Edinburgh there was not a single one. There were a few in the Paisley Museum. He had some eighty specimens. There were 240 different varieties of Scotch tokens known, but many of them were simply varieties with such minute differences—principally in the dies—that they were only interesting to collectors. He imagined there were 130 different tokens known to be issued in Scotland. The Edinburgh half-pennies were the oldest known to exist, the earliest date being 1787. There was also a Paisley Abbeypenny, for which he would be glad to give £20. He could sell it for £50. (Laughter.) He exhibited an Edinburgh half-penny of date 1791, payable at Dumfries, the reason of their being made payable at different towns being that Scotch traders went to all the London and other great markets carrying their pennies with them, and the tokens could be exchanged and current coin obtained for them at certain houses in the various towns. He also exhibited tokens with representaions of Edinburgh University and the Register House; and one dated 1796, issued by Campbell, who kept a snuff shop in St. Andrew Street, Edinburgh. The man Spence already referred to issued, he thought, most of the Scotch tokens—about 70 or 80—which, with his others, cost him about ten years in jail. However, he was a most indefatigable man. (Laughter.) In connection with the trade done at southern cattle markets by Scotch traders last century, Mr Sulley referred to an iron plate

at the Midsteeple indicating the distance to Huntingdon, which had a famous market. The best Scotch tokens of all were those of Dundee, which were remarkable for the way in which they were struck, and which could not be surpassed by any English ones that he knew of. Gatehouse-of-Fleet was the only place within the two counties (Kirkcudbright and Dumfries) which issued a halfpenny of its own, and he exhibited a specimen, on the one side of which was a view of the mill, and on the other the arms of Murray Stewart of Cally. In his collection of tokens some 70 belonged to the period between 1790 to 1797; four belonged to a later period. He had many hundreds of the English ones. He expressed the hope that he had given the Society an interest in Scotch trade tokens. The extraordinary thing in connection with them was that, while there were many records of the English issues, there was no record in Scotland.

Mr James Watt described the proceedings of the Geological Section of the British Association at Edinburgh, 1892.

13th January, 1893.

Rev. Wm. Andson, V.-P., in the Chair.

Donations.—A collection of Grasses and Rushes presented by Mr Tom Brown, late of Auchenhessnane; a collection of Mosses presented by the Rev. George Wilson, of Glenluce; a number of Botanical Specimens presented by Miss Thompson, of Settle; the Essex Naturalist for November, 1892.

Communications.

1. *Botanical Notes for* 1892.

By Mr James M'Andrew, New-Galloway.

Wigtownshire.

The result of a week's botanizing at Cairnryan, Wigtownshire, in July 1892, was rather disappointing. The village is a very desirable spot for spending a quiet holiday, and is not far from

the famous Glenapp. The shore of Loch Ryan is rather barren in good species of seaside plants, but the glen at Lochryan House, which, by the kind permission of Mr Wallace, I was allowed to visit, is comparatively rich in ferns, flowering plants, and mosses, &c. Here I saw more of *Lastræa oreopteris*, *Polypodium phegopteris* and *dryopteris* (the beech and oak ferns) than I had yet seen in Wigtownshire. The mosses, *Pylaisia polyantha*, *Trichostomum crispulum*, *Rhynchostegium tenellum*, and *Pottia Heimii*, were gathered round Cairnryan, while many trees in the glen had their stems almost covered with the lichen *Verrucaria nitida*. As far as I am aware the following are six new records for Wigtownshire :— *Polygala eu-vulgaris*, *Malva rotundifolia*, *Agrimonia Eupatoria* var. *odorata*, *Anthriscus vulgaris*, Pers., E. of Stranraer ; *Carex pendula*, immediately S. of the Ayrshire boundary ; and *Carex lævigata*.

I confirmed *Carex remota*, *Carex Sylvatica*, and *Melica uniflora* for Wigtownshire.

Other good plants seen were *Senebiera coronopus*, *Helianthemum chamæcistus*, *Sagina maritima*, *Sagina nodosa*, *Hypericum androsæmum*, in abundance ; *Trifolium striatum*, three miles S. of Cairnryan ; *Ornithopus perpusillus*, *Eupatorium cannabinum*, *Sonchus asper*, *Veronica polita* and *hederæfolia*, *Melampyrum pratense* var. *hians*, *Empetrum nigrum*, *Orchis latifolia*, *Habenaria conopsea* and *viridis*, *Eleocharis pauciflorus*, *Carex dioica*, *Kœleria cristata*, in abundance ; *Bromus asper*, and *Equisetum maximum*. I saw *Thlaspi arvense* in plenty near Dunragit.

Kirkcudbrightshire.

New records for New-Galloway, Kirkcudbrightshire are—In Kenmure Holms I found this year in abundance *Polygala oxyptera*; also, the Hepatic *Metzgeria linearis*, var. *hamata*, Lindb., in Ballingear Glen, and a new species of lichen on alder trees in Knocknarling Burn, named by Dr W. Nylander, Paris, *Lecidea umbralis*, and *Bryum intermedium* at Kenmure, and the lichen *Physcia ciliaris* on Rerrick shore. *Placodium elegans*, Link ; *Opegraphas atra*, Pers. ; *Verrucaria oxyspora*, Nyl. ; and *Verrucaria biformis*, Borr, from New-Galloway.

Dumfriesshire.

As the result of another holiday at Moffat in July and August, 1892, I have been able to add a few more plants to the Moffat List. Mosses—*Sphagnum rigidum*, var. *squarrosulum*, Hind Gill; *Sphagnum intermedium; Dicranum scoparium*, var. *orthophyllum; Barbula papillosa* (on old trees); *Tetraplodon mnioides; Neckera pumila*, var. *Philippeana*, Beld Craig Glen; *Orthotrichum leiocarpum; Ulota crispula; Physcomitrium ericetorum; Webera elongata*, side of Well Burn and Wamphray Glen; *Rhabdoweissia fugax; Anomodon viticulosum*, Wamphray Glen; *Plagiothecium Borrerianum*—13. I was fortunate also in find- *Hypnum crista-castrensis* on Gallow Hill. It was formerly recorded for the Grey Mare's Tail. Hepaticæ.—*Lophozia Bantriensis*, Well Burn, &c.; *Lophozia Schreberi; Lophozia exsecta*, Gallow Hill; *Lophozia alpestris*, and *Aneura latifrons*, are five new records for Moffat. Lichens.—New records for the Moffat district are *Pannaria pezizoides*, Garpel Glen; *Cetraria aculeata* var. *muricata*, near the Waterfoot; *Physcia cæsia, Verrucaria nitida*, Wamphray Glen; *Thelotrema lepadinum*, Beld Craig Glen; *Squamaria gelida, Bæomyces roseus* and *placophyllus*, Hind Gill; *Sphæroph oron fragile, Peltigera spuria*, two miles N. of Moffat; *Evernia furfuracea* var. *scobicina*, Gallow Hill; *Ricasolia læte-virens*, Lochwood and Beld Craig Glen; *Parmelia reddenda*, Frenchland Tower; *Parmelia ambigua* Gallow Hill and near Wamphray Schoolhouse on fir trees; *Parmelia Borrera, Parmelia cetrarioides, Lecidea pulverea*, Gallow Hill; and *Lecidea lucida*—18. Among flowering plants *Nitella opaca, Bromus commutatus, Trifolium arvense*, and *Ornithopus perpusillus*, found by Mr J. T. Johnstone, are new records for Moffat. Also from the Moffat district recorded in "Journal of Botany" for July, 1892, are *Hieracium rubicundum*, n. sp., and *Hieracium murorum* var. *sarcophyllum*, on Black's Hope by the Messrs Linton.

2. *Meteorological Observations for* 1892.

By the Rev. William Andson.

Lat. 55° 4′ N. Long. 3° 36′ W. Height above sea level, 60 feet.

Months.	BAROMETER.			Self-Registering Thermometer in Shade.						HYGROMETER.			
	Highest in Month.	Lowest in Month.	Range.	Mean for Month.	Highest in Month.	Lowest in Month.	Mean Maximum.	Mean Minimum.	Monthly Range.	Mean Temp. of Month.	Rainfall. Heaviest in 24 hours.	Total Amount.	Days on which it fell.	Mean Dry.	Mean Wet.	Temperature of Dew-point.	Relative Humidity. (Sat = 100.)
	Inches.	Inches.	Inches.	Inches.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	In.	In.		Deg.	Deg.	Deg.	
Jan.	30·421	29·229	1·192	29·775	55·7	19·6	40·4	31·8	36·7	36·1	0·63	2·55	26	35·5	34·6	33·1	90
Feb.	30·571	28·764	1·807	29·768	53·6	9·3	44·5	33·6	44·3	38·5	0·40	1·78	16	36·4	35·1	34·2	93
Mar.	30·630	29·285	1·345	30·061	64	19·7	45	34·4	44·3	39·4	0·37	0·75	8	35·8	34	31·3	83
April	30·508	29·473	1·035	30·025	71·5	22·5	56·1	42·5	49	45·3	0·59	0·69	10	43·4	40	35·9	75
May	30·473	29·452	1·021	29·943	72	30	60·6	42·5	48	51·5	0·58	4·15	18	50·3	47	43·5	78
June	30·440	29·360	1·080	29·906	82	35·3	64·5	46·1	46·7	55·3	0·58	3·82	19	54·4	50·6	46·4	73
July	30·469	29·315	1·154	30·015	77	41	65·7	49·4	46	57·7	0·43	2·72	13	56·4	52·7	48·5	74
Aug.	30·330	29·227	1·103	29·864	80	37	65·7	50·4	43	58	2·00	6·30	19	56·4	53·6	50·4	83
Sept.	30·357	29·257	1·070	29·847	65·4	33·7	59·3	45	31·7	52·2	0·94	3·31	21	51·1	49·3	47·3	87
Oct.	30·358	28·956	1·402	29·706	56·8	19·8	50·6	36·7	37	43·6	0·83	3·70	18	41·9	40·2	38	87
Nov.	30·395	29·342	1·053	29·944	58·5	25·7	43·2	37·2	30·8	42·7	0·58	3·37	20	41·4	40·5	39·8	97
Dec.	30·265	29·192	1·073	29·913	50·7	9	39·6	28·8	41·7	34	0·28	1·97	13	34·2	33·2	32·1	91
Year.	30·630	28·764	1·866	29·901	82	9	53·3	37·1	73	46	2·00	35·01	201	44·8	42·5	40	83

Directions of the Wind during the year.

N.	N.E.	E.	S.E.	S.	S.W.	W.	N.W.	Calm or Var.
25½	45½	34	26	25½	73½	71½	45½	18

Barometer.—The highest reading of the barometer recorded during the past year was on the 22nd March, when it rose to 30·630 in.; and the lowest on 2nd February, when it fell to 28·764 in.;

giving an annual range of 1·866 in. The mean barometrical pressure (reduced to 32 degs. and sea level) was 29·901 in., which is a little above average. In March, April, and July the mean monthly pressure was slightly in excess of 30 inches. The lowest monthly mean was in October, which showed 29·706 in.; and on the 9th of the same month there was a fall to 28·956 in. But neither on that day, nor in the beginning of February, when the barometer fell to a still lower point, the lowest of the year, was the fall accompanied by such severe storms of wind or excessive rainfall as are often experienced in connection with such depressions, although the weather was squally at times, and especially during the night. But on the whole there was a marked absence, at least in this district, of storms of any intensity.

Temperature (in shade, 4 feet above the grass).—The highest reading of the self-registering protected thermometer was 82 degs. on the 9th June, and only once again (in August) was the maximum of 80 degs. reached. The lowest temperature registered was 9 degs. on the 26th December, giving an annual range of 73 degs. On one other night, in February (the 19th of the month), the thermometer registered a minimum nearly as low, viz., 9·3 degs. These were the lowest readings of the year; but there has been an unusual number of instances in which the temperature fell to and below the freezing point—in January, for example, 16, with an aggregate of 73 degs. of frost; in February, 11, with an aggregate of 66·7 degs; in March, 23, with an aggregate of 112 degs.; in April, 12, with an aggregate of 52 degs; in October, 8, with an aggregate 34·7 degs.; in November, 5, with an aggregate of 14·8 degs.; and in December, 21, with an aggregate of 173·8 degs. There were thus in all during the year 96 days on which the thermometer fell to and below the freezing point, with an aggregate of 557·5 degs. of frost. On the other hand, the number of really warm days on which the thermometer rose to 70 degs. and above was comparatively few, viz., 21, the most of which occurred in July and August. The warmest month was August, with a mean temperature of 58 degs. July came next with 57·7 degs. June had only 55·7. The coldest month was December, with a mean of only 34 degs., which is 4½ degs. below the average. March was also a very cold month, the mean of 37·4 degs. being less than that of February, and nearly 5 degs.

under average. With these facts in view, it is not to be wondered at that the mean temperature of the year, taken as a whole—viz., 46 degs.—is considerably below the normal. It is the lowest annual mean recorded at this station since observations were commenced in 1886. In that year it was 46·2 degs. During the other years the annual mean ranged from 46·5 to 48·1 degs. The deficiency in the past year appears both in the mean maxima and in the mean minima—that is, both in the day and night temperatures—which for 1892 were mean max. 53·3 degs. and mean min. 37·1 degs., as compared with an average for the previous five years of 54·6 degs. and 40·1 degs. This shows a deficiency of warm days, but in a much greater degree a preponderance of cold nights. Although the number of nights on which the thermometer fell below the freezing point is not very much above the normal, the number of aggregate degrees of frost —viz., 557 degs.—is greatly in excess of that of any previous year, so far as my observations go, these having ranged from 193 degs. in 1889 to about 500 degs. in 1886. This serves to show the intensity of the frost which marked the winter months of 1892, December alone showing an aggregate of 173 degs. And further evidences of this are supplied by the freezing over of the river Nith about Christmas, with ice strong enough to bear skaters, from the Caul to Albany Place, and the continuance of this up to the 5th or 6th January; and also by the number of water-pipes that were burst. There were only two months in which the mean temperature exceeded the average—May and November—in each case only to the extent of 1 deg.; while June was about average, and all the other months below it to an amount ranging from 1 to $4\frac{1}{2}$ or 5 degs. The year on the whole, therefore, has been exceptionally cold, as the annual mean clearly indicates; and, so far as reports that have appeared enable us to judge, this deficiency of heat seems to have been general over the whole country. I observe that Mr Dudgeon reports the mean temperature of the past year at Cargen as 45·3 degs., being more than 2 degs. below the average and the lowest for 33 years. A meteorological correspondent in the *Scotsman* gives the following report of the annual means for 1892 in different parts of the country: Wick, in the extreme north, 44·1 degs.; Aberdeen, 44·6 degs.; Edinburgh, 45·6 degs.; Leith, 46·3 degs.; Ardrossan, 46·4 degs.; Loughborough, in central England, 46·9 degs; Liver-

pool, 47·5 degs.; London, 48·6 degs.; Scilly Islands, 51·1 degs.; and he adds the statement that, taking Britain as a whole, the means of the year were about a degree and a half below the average; in some places rather more, and in others rather less, but in most lower than in any year since 1879.

Rainfall.—The number of days on which rain or snow fell was 201 (rain 179, and snow 22). The heaviest fall in 24 hours occurred on 29th August, and amounted to two inches, which is the heaviest recorded at this station since observations were begun in 1886. There had been a thunderstorm during the previous night, and on the next day there was an additional fall of 0·60 inches. The result was that the river was heavily flooded, the gauge at the New Bridge showing a depth of 9 feet. There was only one other day on which the fall exceeded one inch, and it occurred in the same month, viz., on 7th August, and amounted to 1·20 inches. There was another occasion in October, however, the 27th of the month, when by a heavy rainfall of 1·4 inches on that and the previous day, combined with the melting of snow on the higher grounds, the river rose to a height of 10 feet at the New Bridge, and flooded the Sands, so as to surround the Hoddam Castle Inn, and farther down extended some way up into Nith Street. The wettest month was August, with a record of 6·80 inches, and the next May, with over 4 inches. The driest months were March and April, March showing only 0·75 inches and April 0·69 inches. These months were exceptionally cold as well as dry, especially March, the temperature of which was four degs. below average. The other months, in respect of rainfall, were about average, or under it, that of January and December in particular amounting to barely one-half of the normal. It is a rare thing for the month of December to register less than 2 inches of rain or snow, as was the case in the past year, and to show a period of 13 days, from the 18th to the 31st, in which no precipitation took place. And I may add, although this does not properly belong to the report of the past year, that this drought, as it may be called, continued through the first five days of January, 1893, making a period of 18 days in which the precipitation amounted to only one hundredth of an inch of melted hoar frost and snow. The total rainfall for the year (including melted snow) was 35·61 inches. Mr Dudgeon reports a total of 39·45 inches at Cargen, and states

it as being 3·44 inches below the average. The average at Cargen, according to his observations over a period of more than 30 years, is about 43 inches. But only twice in seven years' observations at Dumfries has this total been approached, viz., in 1886, when it was 41·13 inches, and in 1891 (a peculiarly wet year), when it was 42·92. The average of the seven years is a fraction less than 37 inches, and this or a little more, say 38 or 39 inches, to allow for the more limited period of observation, is probably nearer the annual average for Dumfries than 43 inches. The year, on the whole, was very unfavourable for agricultural work, for while the coldness of the spring and summer months made the harvest late, the heavy rains of August, and the extremely showery weather of September, extending over 21 days, and of the early part of October, prevented the crops from being gathered in, in many cases at least, till well on in the latter month, and often only after serious damage had been done to their condition.

Hygrometer.—The mean reading of the dry bulb thermometer for the year was 44·8 degs., and of the wet 42·5 degs., a difference of 2·3 degs., as compared with 46·3 degs., and 43·9 degs., in 1891. Temperature of the dew point, 40 degs.; and relative humidity (sat. = 100), 83. Thunderstorms occurred seven times in all—once in May, on the 20th; four times in June, on the 10th, 17th, 19th, and 22nd; once in August, on the 29th; and once in September, on the 3rd; but none of them were severe, with the exception perhaps of that of the 29th August, when the heaviest rainfall of the year was recorded.

A solar halo was observed on the 19th February, and lunar halos on several occasions, but not so frequently as in former years.

The wind observations show as usual a preponderance of westerly winds, the number of days on which it blew from W., S.W., and N.W., being 190½; and from E., S.E., and N.E., 105½; while from due N. the number was 25½; and from due S. 25½; and on 18 days it was calm or variable.

3. *Parsee Religion and its Influence on Christianity.*

By Mr Septimus P. Moore, LL.B., B.Sc., F.L.S.

The following is a short abstract of this very interesting paper :—The Parsee, Zoroastrian, or Magdasian religion was that of the ancient Persians. Taking its rise in Bactria about 1500 B.C., nearly co-eval with the period of Moses, it was the religion of the conquering Persians who delivered the Jews from Babylonian slavery, and who were to some extent their teachers. It remained so until the second Caliph of Islam, Omar, conquered Persia in 642 A.D. Although the Persians were forced to accept Islam, a faithful few held themselves and their religion in precarious safety in the mountainous district of Khorassan, and a few of the more adventurous emigrated to India, where they settled in 716 A.D., their decendants being the Parsees. Haug considers that *Avesta* is a term which means revelation, and *Zend* an explanation of that revelation. Zoroaster taught that *Athura Magda*, the all-wise creator, was the creator of the earth and spiritual life, the possessor of all good things, the good mind, immortality, health, the best truth, devotion, piety, with abundance of every earthly good. These good things he gave to the man who was upright in thought, word, and deed; but he punished the wicked. The paper then showed the prevailing opinions as to the influence of evil, and the punishments which accrued to the wicked. The process of initiation of the young Parsee was described, and also the customs which were observed at the death-bed, and the method pursued in disposing of the bodies of the dead. The entrance of the soul into a future state was also noticed, and the ideas that are held concerning its transition.

The Jews were carried into captivity by the Babylonian King, Nebuchadnezzar, but on the conquest of Babylon by Cyrus, the Persian, they were restored to their native land. The author of the paper maintained with copious arguments that the Jews derived from the Persians the definite belief in a future state, and their ideas of Satan, the spirit of evil, and his subordinate demons.

5th of February, 1893.

Rev. Wm. Andson, Vice-President, in the Chair.

New Members. — Mr Samuel Arnott, Carsethorn, and Mr Hermann Frederick Williams Deane, Dundanion, Moffat. On the motion of the Secretary, the Society recorded its regret at hearing of the death of Mr William Hastings, one of its honorary members, who was distinguished by his devotion to the study of Zoology.

Donations.—The Transactions of the Canadian Institute, Toronto, 1892; the Journal of the Elisha Mitchell Scientific Society, North Carolina.

Communications.

1. *List of Plants found in the Glenluce District of Wigtownshire.*

By the Rev. George Wilson, Glenluce.

1. *Ranunculaceæ.*—(3) Thalictrum minus — (8) Anemone nemorosa—Ranunculus, 21 hederaceus, 28 acris, 29 repens, 30 bulbosus, 36 Caltha palustris, 38 Trollius europæus (Bridge of Park).

2. *Berberaceæ.*—46 Berberis vulgaris.

3. *Nymphœaccæ.*—47 Nymphœa alba. Nuphar, 48 lutea (both of these together in Barlockhart Loch).

4. *Papaveraceæ.*—5 Papaver Rhœas. Glaucium, 56 luteum. Chelidonium, 57 majus.

4*. *Fumariaceæ.*—64 Fumaria officinalis.

5. *Cruciferæ.*—Cakile, 67 maritima. Crambe, 68 maritima. Raphanus, 69 raphanistrum. Sinapis, 71 arvensis. Brassica, 75 oleracea. Sisymbrium, 83 officinale. Cheiranthus, 91 cheiri (Glenluce Abbey). Cardamine, 94 pratensis. Nasturtium, 110 officinale. Cochlearia, 115 officinalis. Draba, 118 verna. Teesdalia, 132 nudicaulis (Droughdhuil Mote Hill and Torrs). Capsella, 134 bursa-pastoris. Lepidium, 138 campestre. Senebiera, 142 Coronopus (Cock-Inn).

7. *Cistaceæ.*—Helianthemum, 149 vulgare.

8. *Violaceæ.*—Viola, 160 tricolor, 162 lutea.

9. *Droseraceæ.*—Drosera, 163 rotundifolia, 165 intermedia.

10. *Polygalaceæ.*—Polygala, 166 vulgaris (from dark to pure white).

12. *Caryphyllaceæ.*—Dianthus, 173 deltoides (Mouth of Luce River). Saponaria, 177 officinalis (Mouth of Luce). Silene, 179 maritima. Lychnis, 188 vespertina and 189 diurna (all shades from dark red to white). Cerasteum, 199 glomeratum, 200 triviale. Stellaria, 207 media. 208 Holostea, 210 graminea. Honkeneya, 216 peploides. Sagina, 225 procumbens. Spergula, 230 arvensis. Spergularia, 231 rubra.

16. *Hypericaceæ.*—Hypericum, 248 androsœmum, 250 perforatum 252 tetrapterum, 254 humifusum, 256 pulchrum, 259 elodes (abundant in marshes among the Sandhills, ditch at Mid Torrs beside highway, Barlockhart Moor, Knock).

17. *Malvaceæ.*—Malva, 262 moschata (Mouth of Luce).

19. *Linaceæ.*—Linum, 269 catharticum.

20. *Geraniaceæ.*—Geranium, 273 sanguineum (abundant, Mouth of Luce and on Sea Banks), 274 phœum (Balkail Glen), 278 molle, 284 Robertianum. Erodium, 285 cicutarium, 287 maritimum (Glenluce is given in the books as a locality. It grew in the North-West of Mochrum parish between the rocks and highway along the shore, between the Coves of Garheugh and Craignarget Burn. I have not seen it for thirty years, and fear it is extirpated). Oxalis, 288 acetosella, 289 corniculata.

25. *Leguminiferæ.*—Ulex, 300 Europœus, 302 nanus (grew beside highway on Kirkmabreck, Stoneykirk, but is extirpated). Sarothamnus, 306 scoparius. Ononis, 308 arvensis [reclinata, Cairngaan ? Kirkmaiden. I saw it twice, above thirty years ago, but fear it is extirpated.] Trifolium, 323 pratense, 324 medium, 329 arvense. Lotus, 342 corniculatus. Ornithopus, 352 perpusillus (Mouth of Luce), Craigenholly. Vicia, 359 cracca, 361 sylvatica. Lathyrus, 371 pratensis.

26. *Rosaceæ.*—Prunus, 378 spinosa, 383 Padus (West of Village). Spiræa, 385 Ulmaria. Agrimonia, 387 Eupatoria. Alchemilla, 392 arvensis, 393 vulgaris. Potentilla, 397 Fragariastrum, 400 Tormentilla, 403 anserina. Comarum, 407 palustrae. Fragaria, 408 vesca. Rubus, 410 Idœus. [The Bramble is plentiful, apparently in varieties which I have not studied.] Geum, 454 urbanum, 456 rivale. Rosa, 450 spinosissima, 468 canina. [I have not studied the varieties of

roses, of which I think we have several.] Cratœgus, 473 Oxyacantha. Pyrus, 480 aucuparia, 482 malus.

27. *Lythraceæ.*—Lythrum, 483 Salicaria.

28. *Onagraceæ.*—Epilobium (several species). Circæa, 507 lutetiania (Mouth of Luce).

28*. *Haloragiaceæ.*—Hippuris, 506 vulgaris.

30. *Grossulariaceæ.*—Ribes, 514 Grossularia.

31. *Crassulaceæ.*—Sedum, 520 Telephium, 524 anglicum, 525 acre. Sempervirum, 530 tectorium. Cotyledon, 531 Umbilicus (introduced as a weed from Nurseries).

32. *Saxifragaceæ.*—Saxifraga, 543 granulata. Chrysosplenium, 549 oppositifolium. Parnassia, 551 palustris.

33. *Umbelliferæ.*—Hydrocotyle, 552 vulgaris. Eryngium, 555 maritimum (Mouth of Luce). Ægopodium, 565 Podagraria. Bunium, 569 flexuosum. Ænanthe, 582 crocata. Æthusa, 585 Cynapium. Crithmum, 591 maritimum. Angelica, 592 sylvestris. Heracleum, 597 Sphondylium. Dancus, 599 carota. Torilis, 602 Anthriscus. Chærophyllum, 606 sylvestris. Conium, 610 maculatum (Bridge of Park Mill).

34. *Araliaceæ.*—Hedera, 614 Helix.

37. *Caprifoliaceæ.*—Adoxa, 618 Moschatellina, Sambucus, nigra. Viburnum, 621 Opulus. Lonicera, 624 Periclymenum.

38. *Rubiaceæ.*—Galium, 629 cruciatum, 630 verum, 639 Aparine, 641 Odorata asperula. Sherardia, 643 arvensis.

39. *Valerianaceæ.*—Valeriana, 646 officinalis.

40. *Dipsaceæ.*—Scabiosa, 654 succisa, 656 arvensis.

41. *Compositæ.*—Carduus (several species). Carlina, 671 vulgaris. Arctium, 672 majus. Centaurea, 678 nigra. Chrysanthemum, 685 Leucanthemum. Matricaria, 687 inodora. Tanacetum, 689 vulgare. Achillea, 604 Millifolium, 695 Ptarmica. Artemisia, 697 vulgaris. Gnaphalium, 705 uliginosum. Senecio, 712 vulgaris, 713 sylvaticus, 717 Jacobæa [718 aquaticus ?]. Inula, 728 Helenium [in marsh at Bay of Low Sunonness, N.B., Inula crithmoides, so plentiful on the Mull of Galloway is not found on our shore]. Bellis, 73 perennis [near Drumbreddan, Stoneykirk, a variety with a brown spot in the centre of the floret is plentiful]. Aster, 738 Tripolium (on our shore the florets are not toothed nor reflexed), Solidago, 740 Virga-aurea (near Mouth of Luce). Tussilago, 741 Farfara. Petasites, 742 vulgaris (Mouth of Luce). Eupatorium,

743 cannabinum. Lapsana, 745 communis. Hypochœris, 748 radicata. Leontodon (species), 757 Taraxacum officinale (varieties). Sonchus, 763 oleraceus, 765 arvensis. Hieracium, 774 Pilosella (we have several Hieracidæ).

42. *Campanulaceæ.*—Lobelia, 809 Dortmanna (Barlochkart Loch). Jasione, 811 montana (very abundant), Campanula, 818 rotundifolia.

43. *Ericaceæ.*—Vaccinium, 824 Oxycoccos, 827 Myrtillus. Andromeda, 831 polifolia (Challochglas, Mochrum). Erica, 836 Tetralix, 837 cinerea. Calluna, 840 vulgaris.

44. *Jasminaceæ.*—Fraxinus, 847 excelsior. Ligustrum, 348 vulgare.

46. *Gentianaceæ.*—Erythræa, 853 centarium. Gentiana, 862 campestris (Mouth of Luce). Menyanthes, 863 trifoliata.

48. *Convolvulaceæ.*—Convolvulus, 866 arvensis, 867 sepium (Mouth of Luce), 868 Soldanella (Do. at High-water mark).

49. *Solanaceæ.*—873 Solanum, Dulcamara (common). Hyosoyamus, 876 nisger (very rare. I twice saw it on the shore, near Mouth of Luce, and at Gillespie).

50. *Scrophulariaceæ.*—Verbascum, 877 Thapsus. Scrophularia, 886 nodosa. Digitalis, 089 purpurea (var. white). Mimulus, 899 luteus (Glenjorrie Burn near Village). Veronica, 908 arvensis, 915 officinalis, 916 Chamœdrys, 920 Beccabunga. Euphrasia, 921 officinalis. Bartsia, 922 Odontites. Pedicularis, 925 palustris. Rhinanthus, 927 Crista-galli. Melampyrum, 930 pratense (Wood of Park).

52. *Verbenaceæ.*—Verbena, 942 officinalis. (I found a plant October 2nd, 1877, and again in 1878 on a cutting of the Girvan Railway, near West Borland Bridge. Probably introduced on the Railway Contractors' trucks from England).

53. *Labiatæ.*—Mentha (I think there are several species), Thymus, 959 Serpyllum. Nepeta, 969 Glechoma. Salvia, 970 Verbenaca. Prunella, 972 vulgaris. Scutellaria, 773 galericulata, 974 minor. Stachys, 978 Betonica, 982 sylvatica. Lamium 992 purpureum, 994 album. Ajuga, 996 reptans. Teucrium, 1002 Scorodonia.

54. *Boraginaceæ.* — Mertensia, 1007 maritima (Gillespie). Lithospermum, 1009 officinale (Glenluce Abbey). Myosotis, 1012 palustris, 1010 versicolor. Anchusa, 1019 arvensis. Symphytum, 1023 officinale, 1024 tuberosum ?

55. *Pinguicula*, 1020, vulgaris.

56. *Primulaceæ.*—Primula, 1037 vulgaris. Lysimachia, 1048 nemorum, Anagallis, 1049 arvensis, 1050 cœrulea (rare), 1051 tenella (Mouth of Luce &c.). Glaux, 1053 maritima. Samolus, 1054 Valerandi. Armeria, 1055 maritima. Statice, 1059 occidentalis (Mull of Sunonness).

58. *Plantaginaceæ.*—Plantago, 1061 major, 1063 lanceolata, 1064 maritima.

61. *Chenopodiaceæ.*—Chenopodium (several species).

62. *Polygonaceæ.*—Rumex, 1107 acetosa, 1108 acetosella. Polygonum, 1111 covolvulus, 1113 aviculare, 1119 persicaria.

67. *Empetraceæ.*—Empetrum, 1131 nigrum.

68. *Euphorbiaceæ.*—Euphorbia, 1133 peplis (and others). Mercuralis, 1146 perennis.

71. *Urticaceæ.*—Urtica, 1150 dioica, 1152 urens. Humulus, 1153 lupulus. Almus (species).

72. *Amentiferæ.*—Quercus, 1156 robur. Fagus, 1158 Sylvatica. Corylus, 1159 avellana. Almus, 1161 glutinosa. Betula, 1162 alba. Myrica, 1164 gale. Populus, 1165 alba, 1167 tremula. Salix (at least four species).

73. *Coniferæ.*—Pinus, 1199 sylvestris.

74. *Typhaceæ.*—Typha, 1204 latifolia. Sparganum, 1206 ramosum.

75. *Araceæ.*—Arum, 1211 maculatum (Glenluce Abbey. I have also seen it above St. Medan's Cave, Kirkmaiden. The leaf is not spotted in either locality. It is also found on the west coast of Kirkmaiden. Dr Gemmell).

76. *Lemnaceæ.*—Lemna, 1214 minor.

77.—*Naidaceæ.* — Potamogeton, species (Mouth of Luce, Genoch).

78. *Alismaceæ.*—Alisma, 1253 Plantago.

80. *Orchidaceæ.*—Orchis, 1269 mascula, 1273 maculata. Habenaria viridis ?

81. *Iridaceæ.*—Iris, 1307 Pseudacorus (Barlockhart Burn).

82. *Amaryllidaceæ.*—Narcissus, 1311 pseudo-narcissus (ruins of Old Castle at Gillespie).

84. *Liliaceæ.*—Scilla, 1335 verna (sea banks, very abundant). Allium, 134 ursinum (Balkail Glen. Sea banks, Kilfillan). Narthecium, 1348 ossifragum (common).

86. *Juncaceæ* (several species).

87. *Cyperaceæ.*—Eriophorum, 1410 gracile. Carex (several species).

88. *Gramina* (many species).

89. *Filices.*—Pteris, 1606 aquilina. Lomaria, 1608 spicant. Asplenium, 1609 ruta-muraria (Glenluce Abbey), 1612 trichomanes, 1614 marinum, 1616 adiantum-nigrum. Athyrium, 1617 filix-femina (several varieties). Ceterach, 1619 officinarum (Old Bridge of Barlae). Scolopendrium, 1620 vulgare. Cystopteris, 1623 fragilis. Aspidium, 1627 aculeatum, 1628 angulare. Nephrodium, 1629 filix-mas, 1634 dilatatum, 1637 Oreoptoris. Polypodium, 1638 vulgare, 1639 Phegopteris, 1640 Dryopteris. Osmunda, 1644 regalis (formerly abundant, now almost extirpated. At Culroy there were fronds 6 or 8 feet long). Botrychium, 1647 Lunaria (Mouth of Luce, Glenjorrie).

90. *Lycopodiaceæ.*—Lycopodium, 1648 clavatum.

92. *Equisetaceæ.*—Equisetum (species).

93. *Characeæ* (there seem to be several species).

My friend, Mr John Thomson, M.D., Edinburgh, a good botanist, marked the London list with me several years ago. I regret that it is so very incomplete. There are many blanks left in the Genera, Ranunculus, Viola, Cerastium, Rubra, Rosa Saxifraga, Rumex, and Euphorbia, and I have marked none of the Salices, Potamogetons, or Orchidians. I have marked none of the Juncaceæ, Cyperaceæ, or Gramina, all of which are plentiful. We are of opinion that there are at least 350 species of plants in Old Luce Parish, beside the Ferns, &c., which are plentiful.

Experts in the Society will find this district well worth visiting. The variety of the Flora is surprising, for there is little variety in the geological formation. We have only the Lower Silurian Sandstone, with a dyke of Diorite on Balcary Fell. No part of the parish attains 600 feet above the level of the sea. The plantations are not very extensive, and I have not marked many of the trees found in them. There are remains of a native forest beside the river Luce. We have a great extent of moor and peat moss, and of sand hills. The salt marsh at the mouth of the Piltanton, the gravel beds and sands at the mouth of the Luce, and at Gillespie, and the rocks along the sea shore from the mouth of the Luce to Auchenmalg Bay, and at Craignarget furnish a great variety of habitat. The mouth of the

Luce is a locality unusually rich in interesting plants, of which I hope it shall not be denuded by being made more publicly known.

The blending of northern and southern species of plants appears to me to be very interesting. I have found the same fact in examining the Mollusca.

I have paid little attention to the Jungermaneæ, Mosses, and Lichens. But I have pleasure in sending you a small collection given me many years ago by the late Rev. Thos. B. Bell, of Leswalt Free Church, marked by himself and the late Dr Greville, of Edinburgh. I have paid little attention to the Algæ and Confervæ. In fresh water springs I have found Batracho-spermum atre and monileforme. The latter is very plentiful in the stony bed of the streams, which drains the great Loch of Mochrum. The variety of plants implies variety of insect life.

In an appendix are given lists of plants found here by some distinguished botanists.

List Copied by Dr JOHN THOMSON, from Transactions of Botanical Society, Edinburgh, 1836-7.

FLOWERS FOUND IN GALLOWAY BY DR GRAHAM.

Artemisia Maritima, East of Burrow Head (not very abundant).
Bartsia viscosa, near Port-William (sparingly).
Bromus velutinus *b*, near Sandhead.
Carex extensa, in one place only.
Erodium maritimum, Coast near Port-William.
Fedia dentata, in many places.
Genista Tinctoria, in many places, from Glasserton to Balmae Head.
Habenaria Chlorantha.
Hilosciadum nodiflorum, in almost every ditch.
Juncus maritimus, abundant.
Lamium intermedium, near Sandhead.
Lycopus Europœus, along shores to southward and eastward of Glenluce.
Malva moschata, along shore.
Œnanthe pimpelloides, abundantly in marshes near sea shore.

Polygonun Raii, in great abundance in many places along south shore.
Scirpus Savii, by roadside near Drumore.
Solanum nigrum, covering large defined patches where seaweed had been dried near Sandhead and Port-William.
Triticum loliaceum, in many places on south shore from Drumore East.

(Dr Macnab.)

Cladium mariscus, Ravenston Loch, Whithorn.
Ledia mixta, near Whithorn.

(Prof. Babington.)

Œnanthe ladimalii, near shore.
Statice occidentalis, cliffs at Mull.

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2. *Surnames of Kirkcudbrightshire.*

By Mr James Shaw, Tynron.

A glance at the names in the Valuation Roll of Kirkcudbrightshire reveals a very different state of matters from that which is patent in conning the Valuation Roll of Dumfriesshire. While in Dumfriesshire one is struck with the agglomeration of certain surnames in certain localities, as of the Scotts in Eskdale, the Jardines, Johnstones, Carruthers, and Bells in Annandale; in Kirkcudbrightshire, although certain surnames are found more frequently than others, they are not found huddled together so much into distinct localities, but are, as it were, peppered all over the surface, the most characteristic names falling here and there without much inclination to gather together or drift into given localities. This has made my examination of Kirkcudbrightshire surnames less interesting than a similar analysis of Dumfriesshire surnames which I attempted last year.

The early history of Kirkcudbrightshire points to a most unsettled state of matters. There was a continual flux and reflux of population in the county. It was an area in which men of different races and callings met and fought. Sometimes one race or clan was successful, sometimes another. Their wars were carried on in barbarous fashion, the victor frequently

aiming at nothing else than the extirpation of the vanquished. During the 5th century British tribes held the country. The Anglo-Saxons next overran it, intermarrying with the natives. Colonists from the Irish coasts made frequent descents, and ultimately overawed the inhabitants. Large swarms from the Irish hive in the 9th and 10th centuries, and settlements of their kindred Scots from Cantyre, who arrived in curraghs by sea, strengthened the Celtic invasion. The Scandinavians confined themselves to settlements on the coast. From the Gaelic settlers is said to have come the name of Galloway. The Normans obtained a certain ascendancy in Galloway, but were never popular. After the Galloway contingent returned from England, having there witnessed William the Lion taken captive, the clan-chieftains of them threw themselves upon the Galloway Normans, demolished their castles, slew their possessors, or forced them to fly. Burton thinks this story likely to be true from the paucity of Norman names in Galloway.

Alexander Comyn laid the foundation of his family's extensive possessions in Kirkcudbrightshire. The success of Bruce soon afterwards was unfavourable to the Comyns. Galloway was conferred upon Edward Bruce by his brother King Robert. Edward Baliol, assisted by Edward III., obtained a strong footing in Galloway, and resided at Buittle. Sir William Douglas in 1353 over-ran Baliol's territories, and compelled M'Dowal, the hereditary enemy of the Bruces, to change side in politics.

Archibald Douglas, the Grim, the illegitimate son of the famous Sir James Douglas, who fell fighting on the battlefield of Otterburn, obtained in 1388 the superiority of all Galloway. On an islet of the Dee, which several members of our Society have visited, and upon the site of an ancient fortlet, the residence of a former lord of Galloway, he constructed the substantial Castle of Thrieve, the ruins of which are still a figure in the landscape. From this feudal castle, as from a centre, the Douglases for nearly three-quarters of a century ruled Kirkcudbrightshire with a rod of iron. As an instance of their feudal tyranny, I may be permitted to quote from Burton. Herries of Terregles having offered resistance to Douglas was slain. Next, Douglas called a great muster of his own proper vassals, and of those neighbouring landholders whom he counted as under his banner. One of these, named M'Lellan, and called

the tutor of *Bunby* (so says Burton, although with us it is written *Bombie*), as being tutor or guardian to the young laird of that name, refused to attend the meeting. He was seized, and taken to Thrieve Castle. His friends had good grounds to fear for his life. His uncle, Sir Patrick Grey, captain of the King's Guard, busied himself for the captive's safety, and appeared, provided with warrants, at the gates of Thrieve Castle. Sir Patrick got a courteous reception. The guest must accept of hospitality first, business afterwards. It is believed the poor tutor, who had been torn from his stronghold of Raeberry, was alive in Thrieve when Sir Patrick arrived, and that Douglas, suspecting the object of his visit, whispered to an attendant to have him despatched. When the hospitalities were ended Douglas read the warrant. To its full extent he was not in a condition to comply with it. Sir Patrick, however, should have his nephew, though unfortunately he was somewhat changed in condition since his arrival in Douglas Castle—in fact, he was headless!

In the long struggle between the Stewart Kings and the Douglases the latter began to go to the wall, and in 1454 or 1455 the Galloway possessions of the house of Douglas went to the Crown. A small force sufficed to take the Castle of Thrieve. There is a tradition that Mons Meg, the huge cannon now on view at Edinburgh Castle, shot into it two bullets of granite from Bennan Hill, and that the second bullet penetrating through the wall shot off the hand of Margaret Douglas, the fair maid of Galloway, then engaged at dinner. In the present century, when the Castle was being cleared of rubbish and repaired for the reception of French prisoners, the workmen found a massive gold ring with the inscription "Margt. de Douglas," showing that it belonged to that lady. It is supposed to have been on the hand shot off.

Douglases.

A Douglas, descended from a younger branch of this great family, was represented until lately by the Earl of Selkirk, at whose seat, St. Mary's Isle, parish of Kirkcudbright, his sister, married to Hon. Charles Hope, still resides, in possession of the family estates.

The name of Douglas has been perpetuated by an enterprising merchant whose lineage is unknown, so that we have Castle-Douglas, the original name being Causeyend. The change was

made in 1789. The same merchant changed Newton-Stewart into Newton-Douglas, but that name reverted. John, his son, married Mary, daughter of Sir John Heron of Penninghame. His grandson, James, obtained Orchardton, Rerwick, 1788. Sarah Douglas, a descendant, died 1874, aged 88, and her nephew, Robinson, succeeded. Hence the name, W. Douglas-Robinson-Douglas, present proprietor.

There are four small proprietors, Douglas, in Dalry, one tenant in Urr, and another in Dalry. The surname Douglas occurs very sparsely through the rest of the County.

M'Dowalls.

The Scoto-Irish family of the M'Dowalls were the original Lords of Galloway. In the reign of David I. the lordship was held by Fergus, a promoter of religion, to whom the Monastries of Tongland, Whithorn, and Soulseat, the Priory of St. Mary's Isle, and the Abbey of Dundrennan owe their origin. His son, Uchtred, founded the beautiful Abbey of Lincluden. Uchtred's son, Roland, succeeded him; and Roland's eldest son, Alan, was the last and best of the Galloway lords. By his marriage with Margaret, daughter of David, Earl of Huntingdon, and niece of William the Lion, his position in Scotland was second only to that of the king. He was made Chancellor of Scotland by Alexander II. Alan's second wife bore him the famous Devorgilla, whose name is still kept in grateful memory by association with the bridge she built and the Abbey she founded.

There are two M'Dowalls proprietors in Rerwick. Girstinwood in Rerwick was bought by M'Dowall from Cairns of Dundrennan.

John M'Dowall of Slagnaw, Kelton, acquired possession 1781. He is a descendant of the Wigtownshire M'Dowalls, and the true representative of the old historical M'Doualls or M'Dowalls already referred to as being lords of Galloway. M'Dowall is not now a common name in the Stewartry. There used to be M'Doualls possessors of eighteen different estates, as well as M'Dougall of Corruchtrie and Dildawn, and M'Dougall of Borgue. M'Dougal and M'Douall are supposed to be the same.

M'Lellans.

When the aforesaid Patrick M'Lellan was tutor of Bombie, parish of Kirkcudbright, there were then in Galloway twelve or

fourteen knights of the name of M'Lellan. It was this family which has given us the name Balmaclelland, or village of the the M'Clellands, to the parish of that name. Time has swept them out of the parish to which they were once so closely allied.

The name M'Lellan does not appear in Galloway in the time of William Wallace. Subsequently it appears, and the rise of the family was rapid. The charter for Balmaclellan was granted 1466. The Bombie property was then in possession of the family. Thomas M'Lellan was killed by the Gordons of Lochinvar at the door of St. Giles' Church, Edinburgh, 1526. The knights of that name are mentioned about this time as possessors of land in Kelton, Rerwick, Balmaclellan, Kirkmabreck, Troqueer, Kirkgunzeon, Borgue, Minnigaff, Colvend. All their properties have changed hands.

The name is found in the following parishes :—Balmaghie, Kirkcudbright, Kelton, Crossmichael, Kirkgunzeon, Kirkbean, Minnigaff, Lochrutton. Deanston, Lochrutton, was purchased by A. Clelland, 1872.

Macghies.

The original name of the parish of Balmaghie was Balmakethe. The subsequent name is believed to have been given or taken from the Macges, who obtained lands there in the 14th century. In 1606 Alexander M'Ghie of Balmaghie obtained a charter of the lands of the parish. Time has been kinder to the M'Ghies and M'Kies than to the M'Lellans. From twenty to thirty lairdships have belonged to persons of these names. They are truly representative Kirkcudbrightshire surnames.

Five M'Ghies, three M'Kies are tenants in Dalry. The names occur in Balmaclellan, M'Kie six. These names also occur in Minnigaff, Kirkmabreck, Balmaghie, Rerwick, Buittle, Kelton, Crossmichael, Parton, Urr, and Colvend. Auchencairn, once in possession of a family of the name of Cairn, from which it derives its name, was purchased less than twenty years ago by Ivie Mackie, whose progenitors belonged to Girvan.

Maxwells.

According to some authorities this was originally a Scoto-Irish family, according to others a Norman. Ewan de Maccuville was at the siege of Alnwick Castle. Eugene de Maccuswell married, not many years after, the daughter of Roland, the Lord of

Galloway. No other name in Galloway, except the Gordons, is in connection with a like number of separate estates in the historian's chronicle; and the larger proportion of the large landlords of this name trace their pedigree back to Roland and his Maxwell spouse.

John Clark Maxwell, the celebrated Professor of Physics, Cambridge, fell heir to his estate of Glenlair, in Parton, through Agnes Maxwell of Middlebie marrying John Clark at the end of last century. In 1702 Captain William Maxwell and Nicolas Stewart, his spouse, had sasine in liferent, and Mr Maxwell, their eldest son, in fee, of the lands and barony of Cairdines or Cardoness, parish of Anwoth, which estate is retained by a descendant. There is another proprietory name in Anwoth a Maxwell.

In Buittle, Wellwood Herries Maxwell of Munches and Terraughtie is the successor of Robert Maxwell, to whom Queen Margaret, daughter of Henry VI. of England, gave a grant of aforesaid lands, reft from the Douglases 1455. This Maxwell was tutor to her son. This family has lands in the parishes of Urr, Troqueer, and Buittle.

Herbert Constable Maxwell Stuart of Terregles is descended from Agnes, daughter of Lord Herries, who married John Maxwell, and, in right of his wife, became fourth Lord Herries, circa 1566.

The Maxwells of Glenlee acquired that property about forty years ago. It was bought by Dr Johnstone, whose son assumed the name of Maxwell. So we may call Glenlee a ghost-Maxwell.

The name of Robert Maxwell Witham of Kirkconnell, Troqueer, carries us a long way back. Janet de Kirkconnell married, circa 1430, Aymer de Maxwell. Dorothy Maxwell, the sole surviving daughter of the house, married, 1844, her cousin, R. S. J. Witham. Hence the double name. 560 years is a long term for unbroken succession.

The late Captain A. P. Constable Maxwell of Kirkland is descended from the old Maxwell stock. A son of the Earl of Nithsdale, who escaped from the Tower, married his cousin-german, C. Stewart, daughter of the Earl of Traquair, and Winifred, her daughter, married W. Constable, baronet, Durham, which accounts for the double name. The estates of Captain C. Maxwell are at present administered by Trustees.

Maxwell of Breoch, or Bracoch, is grandson of Francis Maxwell, whose tall form and enthusiastic speech I remember as an attraction to the meetings of this Society. He died 1867. The Maxwells are the first owners known to history as proprietors of Bracoch, and that as early as 1592. These lands have therefore been 400 years in the family.

Away from these proprietory names the surname Maxwell is sparsely scattered throughout the County.

Stewarts.

In Minnigaff and Twynholm we find many Stewarts. There is one in Anwoth, one in Rerwick, two in Crossmichael, two in Urr, two in Colvend.

Sir Alan Plantagenet Stewart, Earl of Galloway, is descended from Sir William Stewart of Dalswinton and Garlies. A descendant of this was educated along with James VI., under George Buchanan, and raised to the Peerage as Lord Blantyre. Lord Galloway has large possessions in Minnigaff.

Sir Mark John Stewart, Baronet, of Southwick, Colvend. In 1628 there is Lindsay of Auchenskeoch. 1668, William Lindsay, Southwick. The Lindsays, after 150 years possession, sold out, and the lands were more than once bought and sold. At last, Mr Sprot, a merchant, got the lands, and his daughter, Janet, married Mark Hathorn. The surname Stewart was assumed. Lady Hathorn was mother of the present M.P. for the Stewartry. Lindsay, it may be remarked, is a surname not very rare in Kirkcudbrightshire.

Horatio Murray Stewart of Cally and Broughton is grandson of the Hon. Sir William Stewart, second son of John, seventh Earl of Galloway. It was Murray of Broughton who obtained Cally through marriage in the seventeenth century. Alexander Murray married Lady Stewart, daughter of the fifth Earl of Galloway, 1750. This family is notable for close inter-marriages. Cousin takes to cousin and Murray takes to Stewart.

Although Stewart bulks considerably as a proprietory name it is by no means a common Kirkcudbrightshire surname. It would be hard to pick out more than half-a-dozen Stewarts in the united towns of Maxwelltown and Dalbeattie. In the tenant list for Castle-Douglas my eye caught only two.

Gordons.

In the number of families of this name enjoying separate estates in the Stewartry we have here a rival to the Maxwells. In M'Kerlie's "History of the Lands and Owners of Galloway" I pick out 163 estates, all in the Stewartry, as at one time or another belonging to the Gordons. The Maxwells I compute at 160 landowners, scattered, of course, over hundreds of years.

The Gordons are of Norman origin. As far as the Stewartry is concerned, the Gordons appear to have begun life at Kenmure, although Lochinvar, in Dalry, sometimes claims precedence. The Lady Louisa Maitland Gordon of Kenmure Castle still enjoys part of the estates of this great historical name, which has been associated with Kenmure estates for nearly 500 years. Garcrogo, in Balmaclellan, passed away from the Gordons, but its present landlord, who got it early in this century, through marriage, is a Highland Gordon. Threave and adjacent farms were recently purchased by a Gordon, from Montrose.

Sir William Gordon of Earlston and Carletoun, Borgue, is descended from John Gordon of Airds, Kells, who acquired lands in Borgue, 1670. These have thus been in possession for upwards of 300 years.

Gordon as a surname is pretty well represented in the Stewartry. There are five proprietors of that name in Borgue alone, and two tenants. The name occurs in Kirkcudbright parish frequently; also in Buittle. It is common in Kelton. It occurs in Crossmichael and Urr.

Herrieses.

William de Heriz is mentioned from 1175 to 1199. He swore fealty to Edward I. We have seen that the Maxwells of Terregles are descended from a daughter of Lord Herries. Robert Herries, who died at Blackpark, Colvend, and proprietor of Barnbarroch, 1872-3, the last of this great family in the male line, who so long held state in Terregles, and mixed with stirring events. The name Herries is poorly represented in the Stewartry.

Shaws.

I find a curious nest of Shaws, chiefly tenant farmers, in

Balmaclellan, where there are no fewer than eight in the Valuation Roll.

Bardennoch, Carsphairn, has belonged to Shaws for more than a hundred years. For a hundred years Shaws were in Castle-Maddie, Carsphairn. They once possessed Nether Grimmett, Carsphairn. Shaw or Schaw is a surname of long-standing in Ayrshire. William Shaw, prior to 1309, had a charter for lands in Carrick. The name occurs in Balmaclellan, Kells, Kirkpatrick-Durham, Kelton, Borgue, Twynholm.

Hannays.

This name is far from rare in the Stewartry. The principal landowner of Kirkmabreck is Major Ramsay W. Rainsford Hannay of Kirkdale, a descendant of the Wigtownshire Hannays. They have possessed lands in the Stewartry since 1532. W. H. Rainsford married Jean Hannay, and succeeded to the estates 1850. His style after that event was Rainsford-Hannay.

In the district of the Glenkens the names of M'Millan, M'Turk, and Kennedy frequently occur.

But it is impossible in one paper to do justice to the whole subject. Taking a general survey, Stewart is strong in the west, Maxwell in the east, M'Lellan, Macghie, and M'Kie pretty much in the centre. In short, there remains, after all changes and disasters, a considerable representation in the Stewartry of some of the old names mixed up with the history of Scotland.

There are in Kirkcudbrightshire a number of surnames, rather uncouth and uncommon, bearing traces of Irish or Highland origin—M'Anally, M'Quarrie, M'Keand, M'Vinnie, M'Quhir, M'Guffie, M'Caffie, M'Minn, Malcolmson, M'Craken, M'Cammon, M'Jerrow, M'Gunnion, Milroy, &c.

The following surnames have a queer sound:—Warnock, Papple, Riddick, Quig, Hornel, Blythman, Nish, Clenochan, Hollins, Maltman, Clingan, Handley, Cannon, Twyname (Twynholm). The word Twynholm is well represented in surnames. The surname Galloway also recurs. Watret, Gehan, Houliston, Carnochan, and Noe sound odd.

My chief authority for much of the information supplied is due to that excellent work, "The History of the Lands and their Owners in Galloway," by P. H. M'Kerlie (5 vols.). Edinburgh: W. Paterson. 1877.

3. *Scotland in the 18th Century.* By Mr Peter Gray, Edinburgh.

In previous papers we have had glimpses of the material condition of the Scottish people, and somewhat of their moral and social state from the 13th to the 18th century, gathered from the narratives of strangers who had visited the country during that long interval, and left records of their visits. The history of Scotland between those dates naturally arranges itself in two well-marked periods. From the death of the Maid of Norway, in 1290, to the accession of Mary Stewart, the Scottish nation was involved in an almost continuous struggle for existence, sorely trying, but not without dignity, and with a beneficial effect upon the character of the people. The period, however, between the accession of Mary's son, James, to the English throne and that of another Mary Stewart was fully as harassing, but infinitely more demoralizing — aptly described by Principal Shairp as a century of turbulence and disorder, when Superintendency, Tulchan Bishops, Melville Presbytery, Spottiswood Episcopacy, the Covenant, Restored Episcopacy, and Moderate or Non-Covenanting Presbytery were jostling each other; when the whole kingdom was full of quarrelling, fighting, plotting, convulsions, reactions, and counter-revolutions. Amid all this turmoil there was in certain directions considerable moral improvement; but the material condition of the country scarcely advanced beyond that of the Middle Ages, if it did not in some respects retrograde. The flight of James II., and the election of the Prince of Orange and his consort to the vacant throne, however, brought some degree of peace and confidence to the sorely tried land. But the old international hatred between kindred peoples required time to allay, and two rebellions fully opened the eyes of the English Government to the necessity of conciliation. After the Legislative Union, compensation was made to the sufferers by the collapse of the Darien scheme, ruined by the intrigues of the English Government and the English mercantile classes, the heritable jurisdictions which had often been the instrument of great oppression and extortion were subsequently abolished, also with compensation to the holders; while the money that came into the country from these sources and the opening of the

English colonies to Scottish enterprise had a powerful effect in giving an impulse to agriculture, by enabling some of the more enterprising landholders to plant and otherwise improve their properties, and give liberal terms to their tenants. Even before the Revolution attempts at enclosure had been made in Galloway and Nithsdale, but they had been met by the peasantry with determined resistance. Rights or customs of commonage had perhaps grown up in this Celto-Pictish and always unruly province, and the operations seem to have been carried out with harshness and precipitancy, and to have been preceded by the ejection, Irish fashion, of several crofters.

Few people at the present day have any idea how very recent the general prosperity and improved appearance of the country really is. The population of Scotland in the beginning of last century numbered about 900,000, and was roughly but fairly well fed and clad; but their surroundings, their habitations, and the aspect of the country on every side were most miserable. Even so late as 1750 the buildings in the smaller towns and villages, and the farmhouses, were mere hovels, with a but and a ben, built of clay, and thatched with rushes, coarse grass, and heather; great tracts of now fertile land, even in the river valleys, stood barren and treeless; every man by himself, or with the assistance of his neighbours, building his own hut, as his ancestors had done for hundreds of years before him. By and bye we shall see how meanly, as a rule, not only the lower, but even the middling classes lived, and how poorly they were clad, compared with the present day. So late as 1794, flesh meat, which was a drug in the Middle Ages, had become, over the greater part of the country, a rarity on the tables of all but the richest people, and the bulk of the nation had become practically vegetarian. Green crops and stall-feeding, we learn from a contemporary account, were unknown before 1760; there were no artificial grasses, not a blade of wheat grew beyond the Lowlands, and not much there. Three or four returns was considered a good grain crop, which was mostly carried to market on pack horses, and even by the crofter's family, who also frequently carried out on their backs the spare supply of manure applied to the land. At the same time, there was nowhere such penury and privation as now exist in the slums of the great towns, when Scotland has become the wealthiest country in the world. The

climate was more severe than it is now. Since then bogs have been drained, and the hills in many parts have been clothed with wood; the temperature has in consequence been moderated and equalised, the full sweep of the winds has been broken, and now, on elevated table-lands, where grain refused to ripen, heavy crops are secured.

If the condition of the Lowlands was so wretched, that of the Celtic population of the Highlands was much worse. "The last kings of the Stewart race," says Burton, "for their own ends, tolerated and even caressed the Highlanders, but the previous Stewart kings would have put every human being to death who spoke the Gaelic language had it been possible. James VI. made a bargain with Argyle in the south and Huntly in the north to exterminate the barbarous people, each taking his department and fixing a time within which the thing was to be accomplished; but it was found that it could not be done." The Gael were not regarded by the Teutonic Lowlanders as fellow-countrymen, and the rule was to show no more consideration to them than to wild beasts. And after the Rebellion of 1745 they were turned out of their holdings by the chiefs they had too faithfully served to make room for sheep-farmers and deer-stalkers. Of late, however, Donald has come to the front. Scott's novels misunderstood, or some other inscrutable reason, has led the ordinary Englishman to look on all Scotsmen as Highlanders, and the War Office authorities to indue the Scottish regiments in tartan continuations, even the Border regiments. The scanty uniform of a Central African warrior would hardly be a grosser solecism.

It was the Legislative Union of 1707 that put an end to Scottish poverty. In 1695, says the Duke of Argyle in his "Scotland as it Was and Is," the Scots threw themselves with enthusiasm into the Darien scheme, founded, as the Bank of England had been, by William Paterson (born in the neighbourhood of Dumfries). It was intended to open a new trade route to India, but the enterprise was thwarted and ruined by the jealousy of England, being opposed with passionate resentment by the English Parliament and commercial companies, although half the shares were generously granted to Englishmen and subscribed for by them. It almost seemed as if Scotland would have to return to her old historic union with France. In 1703-4 the two

Parliaments were taking measures for arming against each other. The bond through the Crown was proving on trial to be no bond at all. The King, surrounded by English Ministers, and swayed by the feelings of the English capital, had responded cordially to the most outrageous expressions of hostility against the Scots on the part of the English House of Commons; nay, more, he had used his prerogative in the same sense, dismissing his Scottish Ministers, who had the confidence of the nation, because they promoted the trade and commerce of their own country. The nearer, the wealthier, and the more powerful of the two carried the day. William saw that the only way to put an end to the discord between the two nations was their legislative union, but all attempts to bring it about during his reign were thwarted by English jealousy, and the first Commission appointed when Anne came to the throne did nothing, because the English Commissioners would not grant the essential point of free trade with Scotland. Things went on from bad to worse. At last a message was sent from the Queen to the Scottish Parliament, pointing out the dangers to the Protestant succession and from foreign enemies that must arise from the increasing estrangement between the two kingdoms, and promised to agree to conditions by which such injuries as the attack on the Darien undertaking should cease. An equitable arrangement was ultimately arrived at, and the union of the Legislatures took place. The effect of this settlement, the Duke goes on to say, was immediate and enormous. Scotsmen not only gained a full share in the expanding commerce of the world, but shot ahead of all rivals and competitors in the race of industry and of maritime activity. Agriculture was at this time in the same backward state in which it had been for centuries; but when the necessary capital had been acquired the improvement of the soil went forward at a constantly accelerated pace. "No such transformation," justly observes his Grace, "has taken place within so short a space, unless in the case of savage lands suddenly brought under the dominion of civilization." The progress at first indeed was slow and gradual. The Revolution checked misgovernment, but the capital had to be gathered, and it was not till more than half a century had elapsed that the torrent of improvement which had been slowly accumulating burst over the land. It was as—

> "When spring has been delayed by winds and rains,
> And, coming with a burst, comes with a show,
> Blue all above, and basking green below."

Of this we have ample contemporary evidence, but, for brevity's sake, I shall confine myself to two competent authorities.

William Creech, the well-known Edinburgh publisher, contributed, about the end of the century, a series of letters to a metropolitan periodical, chronicling the changes in the condition of Edinburgh, and of a country parish forty miles north-east of that city, under his own observation between 1763 and 1792. Creech notices the foundation, by Sir John Sinclair, in 1790 of a Society for the improvement of wool, which speedily excited much emulation among farmers and landholders, and says that in a short time much labour and expense had been bestowed in collecting the best breeds of sheep, foreign and domestic, and spreading them over the country. As to the capital, in 1763 the number of students at the College of Edinburgh was about 500; it had risen to 1306 in 1791. In 1763 there were only two newspapers printed in Edinburgh. They were in very small folio, with from ten to twenty advertisements a-piece. In 1790 there were four, and in 1792 six newspapers, fairly well as to advertisements, notwithstanding a heavy and increased duty both on advertisements and paper. In 1763 the Carron Company's work was the only Iron Foundry in Scotland, and that had only been established for a few years; in 1792 there were many expensive iron foundries in Scotland, and iron, which had formerly been imported, was now exported in great quantities. In 1792, also, many textile manufactories had been established in different parts of the country, which were in a flourishing condition. The printed cottons, manufactured in 1790, amounted to 4,500,000 yards, an increase of 4,335,000 over 1763. Umbrellas were introduced in Edinburgh by Dr Alexander Wood (the eccentric Sandy Wood) in 1780, and the fashion spread rapidly, for in 1783, Creech tells us, they were much used, and continued to be so; many umbrella warehouses were opened, and a considerable trade done in them. He also refers to the great consumption of strawberries in Edinburgh, which then sold at an average price of 6d the Scottish pint. Notwithstanding this marvellous cheapness, so favourable does the soil and climate of the Edinburgh district appear to be for this fruit that an acre of strawberries had been known to produce at that price above £50. Creech observes that these strawberries were sold without stem or husk, as in other places. It is one of many instances of the conservative habits of the

Edinburgh folk that strawberries are still sold there in the same condition. The increase of wealth, however, produced many changes in the habits of the people. In the twenty years from 1763 to 1783 the dinner hour for people of fashion had changed from two to four or five o'clock in the afternoon, and wine, which had been seldom seen at tradesmen's tables, or only in small quantities in 1763, was often to be found in 1783 in plenty and variety. Among the other changes was laxity in church-going. Sunday came generally to be considered as a day of relaxation, and families began to think it ungenteel to take their domestics to church with them. There was, according to Mr Creech, a remarkable contrast between the manners of the two periods—the decency, dignity, and delicacy of the one, as compared with the looseness, dissipation, and licentiousness of the other. As to minor morals, in 1763, in the best families in town, the education of daughters was fitted not only to embellish and improve their minds, but to accomplish them in the useful and necessary arts of domestic economy. The sewing school, the pastry school were then essential branches of female education, nor was a young lady of the best family ashamed to go to market with her mother. In 1783, says Creech, the daughters of many tradesmen consumed the mornings at the toilet or in strolling from shop to shop. Many of them would have blushed to be seen in a market, and the young lady employed those heavy hours when disengaged from public or private amusements in "improving her mind from the precious stores of the circulating library"; and all, whether they had a taste for it or not, were taught music at a great expense. There was little alteration, he laments, in 1791. Ditto, one might add, in 1892.

The comparative view of the state of the country parish is perhaps still more interesting and important as a gauge of material progress in Scotland during these two remarkable decades. In 1763, the writer tells us, land in this parish was rented on an average at 6s an acre, and only two small farms were enclosed; in 1783 rent had risen to 18s an acre, and all the land was enclosed with thorn hedges and stone dykes. There was no wheat, except half an acre by the minister, no grass, no turnips, sown in the parish, or potatoes planted in the open fields in 1763; in 1783 there were above 9 acres sown with wheat, and about three-fifths of the ground was under grass, turnips,

cabbages, and potatoes. In 1763 no English cloth was worn but by the minister and a Quaker; in 1783 there were few who did not wear English cloth, and several the best superfine. In 1763 the women wore coarse plaids: there was not a cloak or a bonnet in the whole parish. In 1783 silk cloaks and bonnets were very numerous, and the women who wore plaids had them fine and faced with silk. In 1763 there were only two hats in the parish, the men wearing cloth bonnets; in 1783 few bonnets were worn, and the bonnet-making trade in the parish was given up. In 1763 there was one eight-day clock in the parish, six watches, and two tea-kettles; in 1783 there were twenty-one clocks, above one hundred watches, and above eighty tea-kettles. The moral condition of this parish seems, however, to have degenerated even more than that of Edinburgh during those twenty years of prosperity. Good Mr Creech complains that in 1783 the third commandment seemed to have been almost forgotten, and that swearing abounded. He adds—"I may say the same of all the rest of the ten as to public practice." After a number of other details, he sums up the situation thus—"The decay of religion and growth of vice in this parish is very remarkable within these last twenty years."

My second and the most important, I might almost say, of all the authorities for the period under consideration is Mr John Ramsay of Ochtertyre, a small property in the neighbourhood of Stirling, who was born in Edinburgh in 1736. In 1760 he settled at Ochtertyre, and devoted himself to his duties as a landholder, farming a portion of his own land. Mr Ramsay was intimate with Lord Kames and others who took part in the improvements of that time, and was a man of considerable culture and natural ability. He died in 1814, leaving at his death ten bulky volumes in manuscript, containing very extensive notes of his reading, recollections, and personal experience, with a stringent prohibition against any attempt to alter or modify his views in the event of publication, his design having been to present to posterity a picture of Scotland at the period of which he was contemporary. A year or two ago a compilation from Ramsay's MSS. was published in two octavo volumes, running to about 600 pages each, and crowded with so much of value and importance that a selection from them becomes a matter of extreme difficulty.

To begin at the top, Ramsay tells us that in the beginning of the 18th century the sons of private gentlemen were in a few instances educated at home by tutors, but the greater part at the burgh or parish schools, taking their frugal dinners with them; and he observes that they were nothing the worse for being bred with the sons of their country neighbours. In a note we are told that the boys at Dalkeith school were one day much struck with the appearance of a nobleman's son of ten years of age in laced clothes. They looked upon him as a creature of a superior species; but in two days all reverence was gone—the fine clothes being rolled in the dirt by the schoolboys. For the girls it was considered sufficient to send them to the schools in Edinburgh, where they learned needlework and other things that might qualify them to be good housewives, to which were added a little dancing and music. Their time was chiefly occupied in learning and practising the mysteries of family management; and whatever leisure they had was employed in providing clothes and decorations for their persons; in many cases, however, as far as schooling went, "a touch of a country dominie" was made to serve. The reading of these ladies was very limited, and their spelling proverbially bad. Lady Newbigging, in Fife, writing to an Edinburgh shopkeeper for two necklaces, spelt it in such a way that the man read it "naked lasses," and answered her in a pet that he dealt in no such commodities. Theatrical entertainments found their way into Edinburgh about 1719, though opposed for many years both by magistrates and ministers. In those days the Scottish ladies made their most brilliant appearance at burials—it being as common to get a new gown or petticoat for a great occasion of that kind as it is now-a-days for a ball. The gentlemen drew up on one side of the street, and the ladies on the other. Before the procession started the men used to step over and pay compliments to their female acquaintance. About the same time the first assemblies were held in Edinburgh. In the 17th century a great proportion of younger sons went abroad to push their fortunes, chiefly in foreign armies. After the Union, however, many of these young adventurers found their way to North America, or to the East or West Indies, and the rise and increase of manufactures induced many persons to breed their sons to trade or manufactures. About the beginning of the last century it was the

custom of the gentry for the whole company to sup broth out of one large plate. For some years after 1745 most families breakfasted between eight and nine, dined precisely at two, and supped at eight. The dining at two was then regarded as a mark of fashion and figure.

In the beginnimg of the century, there being few grass enclosures, the fat cows intended for winter provision were slaughtered at Martinmas, and no fresh beef or mutton could be had for money after the middle of December until well on in summer. There seems to have been no scarcity of salt provisions, however, at least in the Stirling district; for fat cattle were there very cheap, and it is said that it was the custom of the substantial burgesses of that historic town to lay in at Martinmas a cow for every person in the family, the sucking child not excepted. Broth was a standing dish in every family, but there was no barley in the country except what was imported from Holland. Its place was supplied by groats, and knocked bere. Every family had a knocking-stone, on which the bere was beat each morning by the kitchen maid. The garden stuff consisted chiefly of kail and leeks. It was believed that onions would not grow in the country, and they were brought from Holland and France. They cost about half-a-crown a firkin. At the present day large supplies come to Edinburgh from the Continent, and are sold from house to house by the sailors. Sugar was originally considered as a cordial, but, by degrees, was substituted for honey, as being a better sweetener. The breakfasts of the gentry consisted of collops, fish, cold meat, eggs, milk porridge, skink, a species of soup, strong ale, or a glass of wine and water. Tea was at first regarded as an expensive and unpleasant drug. The precise time of its introduction cannot now be ascertained, but it made rapid progress after 1715, and before 1745 it was the common breakfast in most gentlemen's families in the country. At the first introduction of tea it was common for the young ladies of a family to have great tea-drinkings after the old folks were gone to bed.

The expense of funerals used to be enormous, reaching sometimes to a full year's rent of an estate, and the almost universal custom was to drink at them to excess. A person staggering home from the house where a very worthy neighbour was lying a corpse, being asked whence he had come in that condition,

answered—"From the house of mourning." At the laird of Abbotshaugh's burial, the company appeared so rosy and merry in the kirkyard that some English dragoons quartered at Falkirk said one to another—"Jolly dogs! a Scots funeral is merrier than an English wedding."

In the beginning of last century ale was the common beverage of all classes. The "scourging of a nine-gallon tree" was then a common feat among lads of mettle. It consisted in drawing the spigot of a barrel of ale, and never quitting it night and day till it was drunk out. But for many centuries French wines were a favourite drink of the Scots. When James Howell was in Scotland about 1639 the chopin of French wine was sold in Edinburgh for fourpence, and it was a heinous offence to adulterate or even mix it. At an earlier period it was ordained by Parliament "that nae person within the realm tak upon hand for the time to cum to mix wine or beer *under the pain of death.*" Up to the Revolution claret was still fourpence sterling the chopin. But, owing to the duties imposed on wine from time to time, port and sherry gradually took its place. This gave occasion to the epigram attributed to the author of "Douglas," commencing—

> "Firm and erect the Caledonian stood,
> Prime was his mutton and his claret good."

But, compelled by the fiat of the English Ministry to substitute port for the wholesome claret—

> "He quaffed the poison, and his spirit died."

Claret must, however, have continued to be imported pretty far down in the century. I have heard my father describe how, in his boyhood (about 1785, probably), on the arrival of a French ship, wine-laden, the people would flock down to Leith with all sorts of vessels, and bring them up filled with good claret, at a moderate price; and he added that there was always a barrel, with the head out, on deck, with a pannikin floating in it, out of which anybody might drink.

The dress of the gentry in these times was always plain and frugal, but on great occasions they spared no expense. Even somewhat late in the century it was etiquette, not only when they married, but also upon paying their addresses, to get laced clothes and laced saddle furniture. In the first part of the century it was the custom of persons of figure, whether young or old, to wear tie wigs in dress and jack-boots. These last were

given up at an early period, except for travelling. In my own early days several old men in Dumfries still kept to the pigtail, knee-breeches, and powder. Upon the conclusion of the Rebellion of 1745 there was a rage for wearing tartan, the Jacobite ladies taking that method of expressing their attachment to the Pretender. In the early part of the present century the Waverley novels revived the fashion. The millinery business was hardly known in Scotland in the beginning of last century, but it was introduced by degrees from London. A very mean style of building, says Ramsay, both in public and private buildings, prevailed in Scotland between the Restoration and the Union. But after the latter event, when Scotland revived apace, the country gentlemen began to build better houses. Even well on in the century the Lords of Session and principal lawyers in Edinburgh were very meanly housed. Lord President Dalrymple, with 20,000 merks annual income, lived in an eight-pound house. With the better houses came a better style of finishing inside. Ceilings and walls were lathed and plastered, but there was very little painting or papering, and carpets were little used.

In the end of the 17th and the beginning of the 18th century the farmers sat at easy rents, and the system of husbandry was of the most primitive kind ; on the borders of the Highlands the land was sometimes held in run-rig, the several tenants having ridge about of every field. In general no manure was applied, the land being allowed to rest a shorter or a longer period between the crops. The grain was very poor in quality. Black and grey oats was the chief crop, and bere. "Forty years ago," says Ramsay, "there was no wheat raised in this country, except a little of a red-bearded kind in the dry fields of Airthrey. It was hardy, required little manure, and produced very white flour." The farm-horses were small and weakly, and the carriages were sledges and small carts. The buildings were constructed of feal or divots, which in a few years had the appearance of a wall of clay. Stable doors were made of wattles, and there were seldom any locks on barn-doors. The most rigid economy was exercised by the tenants both in dress and domestic expenses. They ate at the same table with their servants. Oatmeal porridge was esteemed a luxury, bere meal being generally used. Water kail was a standing dish, being made, without flesh, of greens and groats. For kitchen they had butter, cheese, eggs,

herrings, and sometimes raw onions after the kail. Yet they were contented and pleased with their lot. An old man, who at the age of 95 was "lively and active," was asked by Ramsay in 1782 whether the old or the present times were the best. He answered—"There were difficulties then, there are difficulties now, and there will be difficulties to the end of the world." Venerable sage! The first important agricultural improvement was the general application of lime to the land. Then came enclosure, and the introduction of the English methods. Wages were low. In 1756 a labourer's wage was 6d a day in summer. Tailors had 2d or 2½d a day, with victuals. They afterwards rose slowly to 4d, where they remained for a number of years. The money remitted to pay the troops at the last rebellion, and afterwards to purchase the hereditary jurisdictions, gave new life to industry and enterprise, and to a liberal intercourse between the two kingdoms. Scotsmen returned from the East Indies with moderate wealth, the trade of Glasgow flourished apace, and everything was prospering. Road-making was carried forward on a great scale, partly by Government, and partly by statute labour. A cart with proper wheels was, about 1730, a curiosity. With free intercourse with England, the cattle trade was greatly extended. The enclosing of pasture land was another improvement which encountered special opposition from the country people. Turnip husbandry was introduced from England about the middle of the century. About 1760 barn fanners were introduced. In ancient times every mill had a shieling hill, where the winnowing was performed in the open air. It is said the Antiburgher ministers testified against barn fanners as a creating of wind and distrusting of Providence. But there was too much self-interest on the other side, says Ramsay, and this theory made little impression on the farmers. About 1746 the Irish method of cultivating potatoes in the open field was pursued with great success in the neighbourhood of Kilsyth. Thence it spread by degrees all over the country. The thriving state of manufactures at this time gave farmers a market for their wool, and, indeed, for everything produced on their farms. Nor must the benefits of the banking system be overlooked.

The Legislative Union produced a great change in the literary tastes of Scotsmen. From peer to peasant, then and long afterwards, the Scottish Doric was the only dialect in use. Between

that date and 1760 the introduction of English literature, especially of the *Spectator* and other periodical publications, the study of English authors, and, in the latter part of that period, greater intercourse between the two countries, led to the adoption of classical English in all important works. This also fostered the growth of the great literary and scientific revival of the century. Among the galaxy of men of letters and science of that period may be named Hume, Robertson, Lord Kames, Tytlers (father and son), Sir John and Sir David Dalrymple, Beattie, Fergusson, Smith, Reid, Lord Monboddo, Cullen, the Homes (poet and physician), Monroes (father and son), Blair, Mackenzie, Moore, Mickle (an Annan man), Adam and Sir John Sinclair. The language of England and Lowland Scotland, says the historian Burton, was taken from a source common to both. But after the War of Independence they diverged. The English received an infusion of Norman, while Scotland kept closer to the original Saxon. French influence brought a few terms into the Scottish language, but it scarcely warped its structure. So it came to pass that Scottish writers of the age of Chaucer and Gower wrote in a language more intelligible at the present day than that of their English contemporaries; in the 16th century they were scarcely intelligible to each other. Under the circumstances, Latin took the place of Scottish among scholars, becoming almost a mother tongue to them. But Latin, in the beginning of the last century, was dying away as the common language of literature and science, while any attempt to keep up a Scottish literary language had been abandoned in prose before the Revolution. In verse it has lasted longer, but has been greatly modified. Besides the colloquial language (I quote again from Ramsay) spoken in good company about 1746-60, there was the oratorical, which was used by lawyers and clergymen. That was somewhat broad enough, but none were without strong traces of a provincial dialect, and some in the attempt at the English idiom and accent stumbled into a Babylonian dialect that neither Englishmen nor Scotsmen could understand. Three Lords of Session were called up to the bar of the House of Lords in connection with the Porteous affair, and Ramsay, on the authority of Lord Kames, tells us that at supper the night before they were to appear, Lord Dun thus discoursed to his colleagues—"Brethren, I am sorry to say neither of you will be understood by the House to-morrow. I

am, you well know, in a different situation, having made the English language my particular study." "To-morrow came," said Lord Kames, "when Lord Royston was hardly intelligible; Lord Milton, though no elegant speaker, was well heard and his meaning comprehended. As for Lord Dun, deil a word from beginning to end did the English understand of his speech." Ramsay further states that it was alleged of a relation of his own, then a young woman of fashion, that her language kept pace with her dress, and that when going to a ball or to the Countess of Breadalbane's routes in a manteau and petticoat, she knapped English insufferably.

There is little of ecclesiastical matter in Ramsay's remains suitable for reproduction in a paper like this. One tit-bit, however, is too racy to be omitted. In a disputed induction, a friend of the patron offered a leading elder 100 merks to sign the call, and conciliate the people. He rejected the offer, but his wife came next day, and said her husband had a tender conscience, and could not take money, but would they try him with a saughie and a boat of limestone? The hint was taken, and succeeded to admiration.

10*th March*, 1893.

Rev. William Andson, Vice-President, in the Chair.

Donations and Exhibits.—Essex Naturalist, December, 1892; Proceedings of the Glasgow Natural History Society; Proceedings of the Academy of Science, Rochester, New York State; and the History of the Old Lodge of Dumfries (Kilwinning, No. 53), presented by the author, Mr James Smith. Mr J. R. Wilson exhibited a copy of the intimation of Mrs Robert Burns' death, signed by Robert Burns, the son of the poet, dated 26th March, 1834. Mr Arnott exhibited a large collection of floral specimens from Broussa, Asiatic Turkey, collected by Mr Millingen, a resident of that place.

Communications.

1. *The Origin of the Grierson Museum, Thornhill,*

By Mr James R. Wilson, Sanquhar.

I find that Dr Grierson began to keep a diary in 1833, when 15 years of age, and continued to do so for several years. The

series of diaries is not complete, but they still afford material for a short paper. Throughout there is abundant trace that his early years were zealously devoted to investigations in natural history, and also in all departments of antiquities. The entries are simple, but are often accompanied by searching questions for after investigation. He appears to have first given his attention to minor matters, such as wasps, bees, birds, and bird nests, and to have afterwards ventured far afield into camps and cairns and other objects of interest in the wide district surrounding his home at Boatford. I will give a few specimens of the entries, not exactly in the doctor's own words, but as near thereto as possible. Some of the sentences are difficult to interpret, for as you well know he wrote as he felt, and without much respect for the elegancies of language. The diary for 1833 is awanting, and the second begins in January, 1834, and has two quotations prefixed, viz. :—"A drop makes a stone hollow," and "Observations supersede theories." The following are entries taken from these diaries :—

13th January, 1834.—I found a large wasp on the inside of the school window creeping about. I put it into a box in which there had been snuff, and upon taking it out it was quite motionless. The next day it was apparently dead, but when held to the fire it made a slight quivering motion. There was a broken pane in the window, but whether the heat of the house invited it from its lethargy or not it is certainly very early for it to appear.

9th Jannary.—Optical illusion. While going to Penpont about 10 in the morning a little past the turn I saw the English hills very distinctly with some snow upon them. It was hard frost when I saw the phenomenon.

14th February.—I opened an ant hill which contained a great number of light brown ants. They were not torpid, and I never saw an ant torpid in the winter.

21st February.—While breaking a large piece of coal brought from Drumbuie, near Sanquhar, I found it marked like fibres of wood and some pieces of wood as if decayed quite black in the layers. I do not remember to have noticed this before.

23rd February.—In the morning I saw a magpie flying into the heart of the old fir-tree with a stick as long as itself. Whether or not it is easy for them to build I know not. It is the first operation of the kind I have seen.

27th February.—I heard the peaweep. Does it migrate?

1st March.—I found a lady-bird that I never saw before in my garden. Red, with white strips, and abdomen brown. Robin redbreast sings this month.

15th March.—One of my butterflies came out to-day. It is a white one. This shows heat has an effect.

17th March.—One of the Castle gamekeepers shot me a thrush for stuffing. In skinning it I found above the joint of the leg (the ulna) between the sinew and bone a quantity of white worms. They moved when taken out, and were wound up in clusters with a little raised lump as of fat.

18th March.—While among the hills getting heather for bordering I found a quantity of cranberries among the fog. They were red, very plump, and had a very slight acid taste. I was not aware before that they withstood the winter. They must make excellent food for the wild birds in the winter when the hills are bare.

26th March.—I found in the wood a patch of toad spawn. The pin-heads were almost ready to swim. They were quite formed, though still enveloped in the jelly.

29th March.—I got a white mole skin from the molecatcher (Hastings) for 3d. It was pure white save a rusty-red strip on the belly. He said that he got it near Sanquhar in a field where he had got five or six, one of which was spotted black and white. He also had got one in Boatford ground, but they were very rare. He said moles couple in March, and breed in May, their nest consisting of grass in the inside of a large hillock like a barrowful. There were generally five to seven moles in a nest.

8th April.—I got a snake brought to me by a boy from Sanquhar. It was very dark; also a young snake, which was lively.

23rd April.—Yellow hammer nest, outside withered grass, inside fine roots, lined with white dog hair. Eggs whitish, marked as with a pin, with a kind of colour approaching purple. Found upon the roadside to Eccles under some grass and a withered cone.

Following down the Eccles Burn that runs past Stepends, I found the alternate-leaved saxifrage among the common variety.

24th April.—Shown a yellow wagtail's nest under a brow up Shinnel water. Nest, fine roots and some straw; inside some feathers, lined with horse hair. Five eggs, dirty white, with very light brown spots.

5th May.—I got from J. Douglas a starling's nest containing two eggs, which he found near the Castle upon an elm tree near a burn, and not very far from the ground. The nest is formed something similar to a blackbird's. It is built of green moss and clay, with a very little white moss. The inner structure is plastered, and the inside is lined with a thick coating of pretty fine grass. The eggs are white, slightly tinged with green, and pretty thickly spotted with a brown approaching to red.

He makes some general remarks at intervals, of which the following for May is a fair specimen :—This month may be said to renew the labours of the naturalist. Bird nests are found in abundance, many insects may be collected, snakes and adders have appeared, the meadows and woods are clothed with flowers and foliage, the seeds have sprung, and winter is borne down by the vigorous spring.

3rd May.—I saw the white hare at Drumlanrig Castle, and also in the hothouse where pines were growing a particular ant, which Hannan said was foreign. It was much smaller than our one.

21st May.—I went to see at the Gate, Closeburn, a pig said to have three ears. The pig on examination had its natural ears, and upon the left side of the head the form of an ear much smaller than the natural one. It had no entrance into the head that I could observe, but in time it may.

July.—I found my snake dead after having kept it more than eleven months. I observed last season before winter set in that the black clocks that fell into his den were all broken and lying in balls or lumps. Now, does a snake vomit the indigestible parts of its food as birds of prey do? I could account for it no other way. True, there was a toad in beside it, but the size of the lumps, and, altogether, it never struck me to be it. The toad still enjoys seemingly good health. The serpent and he were very good friends and never seemed to mind each other, the serpent crawling over its body without disturbing it. The serpent never would eat in my presence.

11th July.—Lett the school before 12, and went up the hill craig before Tynron Doon. Kept upon the ridges till intercepted

with corn fields; came on to the Tynron road for a mile, followed up a burn, kept upon the ridges till about a mile below Tynron Kirk. Crossed the hills, found the tormentilla in great abundance, and came on to near Auchenhessnane. In marshy ground above found the trembling grass in abundance, entered a fir plantation about half-a-mile or less left of Auchenhessnane. Rested about half-an-hour, it being very warm. Found a hawk nest. Went out at the end of the plantation, and their found violets that were quite new to me. I then inquired at a man, who was ploughing, the road to Glenwhargen Craig. It was then five o'clock, and I now made steadily for Glenwhargen, which was five miles distant; came to the Four Towns, and then to the Craig. At a distance it is rather insignificant in respect to what I expected, but the nearer it is the more interesting. At the bottom it is covered with hazel bushes, but the more you ascend they become more scrunted and straggling. For a considerable way up the stones fallen from the craig give way with your feet, so that little progress is made. You then come to the first breast of rocks, which I mounted and came on to the green ground. Then ascended another breast of rocks more steep than the former, but with some difficulty. Here out of a clift I saw a blue hawk rise, but was unable to get at the nest without danger of falling headlong from an immense height. Reached the top, and here was the finest scene. The sun was fast setting, and the shades of the hills grew long. On the left was a plain containing four pretty large farm-houses, with the water of Scar winding through the middle, the whole surrounded by high hills, some of them very steep. I now began to set my face for home, and made for it by the straightest way, keeping the public road, if road it can be called. The day began when I was about Auchenhessnane to make way for night, and at last I got home after being away 10 hours and travelling upwards of 24 miles.

14th July.—Got a pair of rabbits—white, with a light brown strip down the back. I put them into the house I made for Keely (the hawk), and after a little put the hawk in beside them. They were not afraid of each other. The rabbits approached cautiously to the hawk as if to examine their new companion. They all ate when I gave them food.

22nd July.—I got a Merlin hawk from a boy for 2½d. When I offered to touch it, it turned upon its back and struck with its

feet in a very threatening manner. I put it into the cage with my other hawk and rabbit. My old hawk stared at it, but did not offer to come near it. The rabbit smelled it all over, and to this reception he seemed quite indifferent. He was not long till he mounted the stick where my hawk was sitting, but seemed to avoid it. When I gave it meat it struck and bit furiously, but now and then when he bit my fingers I gave him a mouthful of meat. After he had swallowed a few pieces he began to be more quiet and docile.

The diaries between this date and July, 1838, are awanting. Commencing again at the latter date, there are some interesting entries.

20th July.—Went to fish up Cample with J. Hunter. Did not get any fish, the day being fiery with heavy thunder showers. He read some of his poetry. It appeared to be rather meagre in ideas, and had rather little sense. The verse seemed correct. At Cample saw the *Ramex Alpinus*, but near a house.

25th July.—Fished for pike, but did not see any; fished for par, and caught nine and one burn trout.

27th July.—Started in the morning at six with J. Hewetson to fish in Scar. Went by Eccles. Found, for the first time in Dumfriesshire, above the Eccles woods, the *Habenaria viridis.* Went up Scar as far as Dalzean; that is at the Four Towns. Fished down to near the Upper Schoolhouse, and caught ten burn trout, one with the minnow. Found the *Campanula latifolia.*

29th July.—Took a cast in lead from the mould of the monkey's hand. It is one I took from a specimen that died in Wombwell's Menagerie while in Edinburgh in 1837.

1st September.—Worked in the Garden. Some potatoes which had been planted whole, with all the eyes destroyed by means of a hot iron, except one, were partly raised to-day. The produce from a single shaw averaged about 12 or 14. Some had as many as 18, while others had nine. The potatoes were very large and fine. They came decidedly faster forward when thus treated than in the ordinary way.

17th September.—Worked. Put up a specimen of two round worms found in the duodenum of the cat. Went to Thornhill, and agreed with J. Hunter to go to Leadhills on Wednesday. Saw his Minerals, and got a specimen of coarse granite. It had come from some part of the Highlands as ballast in a ship.

19th September.—Left home about half-past six in the morning for Thornhill, and met J. Hunter, when we set out for Wanlockhead. In a sandstone quarry, before coming to Enterkin, we found the marks of several fossils, among which we found one specimen of *stigmaria*, and a particular impression upon some of the hard stone which I supposed to resemble the drawings of the footmarks of the tortoise found by the Rev. Mr Duncan. The rock which composes the Enterkin hills seems to be greywacke slate, or a rock approaching to it, with a considerable number of veins and incrustations of silica.

After a minute description of the Lead Mines at Wanlockhead and of the means adopted for crushing and separating the lead from the quartz, he makes the following remarks :—Owing to the poisonous nature of the water, which has been employed in the washing of the lead, no dogs can be kept. There is no poultry of any kind, and no pigs are kept. Cows are kept, but they frequently die. Five died last season. Horses are little required. There are only three kept at Leadhills for a mill connected with the Lead Mines. The climate is of the severest description. Corn rarely ripens, and is only cultivated for cutting green for cattle. The potatoes are small and watery. Fruit such as apples, currants, &c., rarely ripen. The greens and other vegetables I saw were by no means good, and were very late. At Leadhills there is a plantation of trees, chiefly beech, around the director's house, which have attained a considerable height—what we of the low country would suppose to require twenty years, but upon inquiry no one remembers of their planting. The oldest men since their childhood remember of them being always the same, and it is thus supposed they must be considerably above one hundred years old. Gold is frequently found after heavy rains in the sandbeds of the streams. One boy found lately a piece which he sold for £3, but the quantity found is too small to repay the time and trouble required in procuring it. Mr Hastings, Wanlockhead, told me of a curious custom there of naming the different clusters of houses after the oldest inhabitant of them.

21st September.—Breakfasted with Mr Shaw, of Drumlanrig, and saw the fish pond and the specimens of his fish. He lent me his paper upon the natural habits of the salmon, but I will refer to what I saw and to his paper in a day or two. When at the

Creel I saw a young otter. Mr Shaw says they are common. He says the *Botrychium Lunaria* is growing in the field near the Creel. I got a specimen of petrified rush from Sanquhar from him, as also three specimens of phosphate of lead. He told me it was customary for the people of the low countries, who lived near fuel, to bring down lead ore from the lead mines and smelt it. One of these smelting stations he directed me to as lying near Eccles.

25th September.—Went with J. Hunter and Joseph Kilpatrick, Thornhill, to see a vitrified fort in Tynron. It is situated on the farm of Pinzarie, about two miles from Tynron Kirk, up the water of Shinnel, a little from the side of the road. The situation is upon a gently rising hill at the bottom of a moderately high range composed of greywacke, passing into greywacke slate, and distant from the Shinnel water about 500 yards. It presents a slight elevation above the adjacent land in the form of a circle, and as nearly as may be guessed the circumference of the circle is about 80 yards. Running through the centre from east to west is a rather prominent elevated ridge, the prominence being chiefly in the middle, composed of loose stones, in no way cemented, but chiefly vitrified. These stones, the largest of which may weigh 14 lbs., bear evident marks of having been in a state of fusion. Some are coated with a coarse-like glass of a brown colour. The internal structure of these stones is porous, somewhat resembling pumice stone, but much denser and of a lead colour, but sometimes of a lead colour approaching to purple. Others again have a somewhat fibrous texture, and these are not so porous, while others are devoid of the porous texture, and a good deal resemble some varieties of green stone, particularly when the grains of quartz are large. I shall return to the notice of these stones after I have submitted them to analysis. Could not find the fort mentioned in the statistical account of the parish, but only of the existence of a Roman road and of a Roman encampment. The latter is composed of a quantity of rather small stones, but the larger may have been removed for the building of dykes. It is about $1\frac{1}{2}$ miles from the vitrified fort, and upon the top of a range of hills separating Shinnel water from Scar water. Found an account of vitrified forts in the English Cyclopædia Art Fort. Found no plants on the way. Brought home some specimens of vitrified stone.

29th September.—Bound two books. J. Hunter called. Went to Thornhill and made an exchange of a box for a small set of drawers with Hunter. Got a specimen of Aberdeenshire quartz and of mica from him.

8th October.—Washed the minerals. Made 14 boxes for minerals.

9th October.—After dinner, fished with bait, and caught 14 par. Upon examining them I found two with very large melts, of which I took a drawing. These two par were by no means the largest. I could not detect any difference in them externally from the others. Stuffed one of the par—a female one according to Mr Shaw.

10th October.—Put up a specimen of the melts of a par. Went to the Rev. Mr Menzies' (Keir); dined and drank tea. He gave me a specimen of the *Rhamnus frangula* (alder buckthorn), which grows in the parish near to the farm of Penfillan, in a marsh at the foot of the hills. I also got from him eight specimens of orchideous plants which he collected in Switzerland. He has a very fair collection of orchideous plants. He had not heard of the vitrified fort in Tynron. I was told that the glow-worm was common in certain situations about Bellevue.

11th October.—Put upon paper the eight specimens of plants I got from Menzies. Read over again Shaw's paper upon the par. He states that (1) the eggs take 90 days to hatch; (2) remain after being hatched 50 days under the gravel; (3) and during the next season form the May or summer par; (4) that the second season it assumes the silvery scales, and constitutes the salmon fry when it migrates to the sea.

15th October.—Read Cyclopædia—article, "Paper Making." Collected a quantity of sludge left by the drying-up of some stagnant water. It had become bleached, having entirely lost its green colour. Its fibres resemble those of cotton. It imbibes water freely, and becomes rather pulpy. It appears to me that this substance might be applied to the making of paper, or some similar use. I have picked some of it, and by floating it in water and collecting it upon a wire sieve, and removing it therefrom to folds of flannel and subjecting them to the pressure of a strong screw press, I procured a tolerable paper, which was improved by the addition of isinglass. The sludge may be procured in great

plenty. I shall again advert to this substance. Commenced the skeleton of a flounder.

20th October.—Worked at the skeleton of the flounder, finishing the removal of the soft parts. Put it to steep over night in a solution of chlorate of lime.

22nd October.—Put up the skeleton of the flounder. It is the best skeleton I have ever made.

23rd October.—I brought in the wasp nest. It was completely empty of wasps, and what is curious is that the wasps have built new combs with their mouths downwards, removing most of the old one which was placed upwards.

30th October.—Went to Thornhill; saw the sword that was found several years ago beneath the surface of the small rising ground where the Penpont road divides into branches leading to Tynron and Moniaive. The sad Goths, into whose hands it fell, removed the rust by grinding it, and decorated it with a wooden handle wound round with black and red thrumbs. They had broken off a small piece of iron which they said was a spring, in order to fit the handle. As it at present exists it has a double edge. . . . It is about 2½ feet long, and it tapers towards the point which is awanting. As to the letters and crown mentioned before there is no trace of either, and its present possessor knows nothing of them. The spring mentioned was probably a handle, the remainder having corroded away. From the state it is in it is devoid of interest. I was told by P. Mounsie that some time since an urn filled with bones was found in Closeburn, but was broken in the removal. A man of the name of Sandy Wallace, a weaver, in Thornhill, has some fragments of it.

5th November.—Went to Drumlanrig, and called upon Shaw and Hannan, but neither was in. I saw, when on my way to Drumlanrig, a cock pheasant with a pure white tail and back spotted with white.

11th November.—In examining the prices of my books marked in my catalogue, I find their value to be £36 17s 4d, and their number 223.

The following is a statement of the probable expense of my museum :—About 50 vials and bottles, 5s 6d ; 5 preparation jars, 3s ; 4 insect boxes, 18s ; shells, 10s 6d ; an enjected arm, 3s 6d ; minerals, 2s 6d ; corals, 6s 6d ; stuffed birds and skins, £1 ;

monster adder, 2s 6d ; bones, 5s ; 4 horned rams heads, 4s 2d ; for &c., &c., 5s 4d ; paper for herbarium, £2 ; total, £6 6s 6d.

This statement is what I suppose my museum to have actually cost me in money, viz.—£6 6s 6d—but the most of it has been collected free of expense. I have found great advantage from my museum. It is an additional stimulus to study, and makes the knowledge more perfect of the several objects it contains. The objections to a museum are chiefly the time occupied in collecting and preparing the specimens, but much of the time occupied thus would be lost if not so employed. My chemical apparatus has cost me, including the substances, about £3 17s. My other apparatus is not worth mentioning, consisting of—An injecting syringe, 5s ; pocket compass, 2s ; dissecting case, 7s 6d ; total, 14s 6d.—Thus making in all for my library, £36 17s 4d ; museum, £6 6s 6d; chemicals and apparatus, £4 11s 6d; total, £47 15s 4d. This, of course, includes any articles I have at any time bought. The summer and autumn are now past, and as circumstances depending in the Court of Session prevent money being easily had, besides the load of labour I must undertake in Edinburgh were I to make this winter my last, I have resolved, partly by the advice of friends, to go to Dumfries and attend the Dispensatory Infirmary, and receive instruction in the compounding of medicines there. I may be right, as I think myself, or I may be wrong, but it is scarcely a mere matter of choice—money is necessary. The course of study I have to pursue this winter will be of a practical nature, and may nature be my guide. I am convinced it is the sure guide, provided we know how to follow its guidance.

These extracts I have copied with care from the two diaries. They give us a good idea of the doctor's habits in his early years, and show conclusively that he was a diligent student in natural history and antiquities. His perseverance is well brought out in them, and although they are not so graphic as we might have expected, still we see in them ample proof of the bent of his mind. From small beginnings we see that his collection was gradually increasing, and his chief desire is shown to have been his own instruction. In after years his desire was to benefit his fellow-men, and many of us can remember the pride he took in instructing all, whether old or young, with whom he came in contact. To confer such benefits during his life was most praise-

worthy, and it is a further proof of his deep interest in his fellow-men that he left his valuable collection for the benefit of future ages.

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2. *Plant Superstitions.*

By Mr Samuel Arnott, Carsethorn.

Before passing to the consideration of the wider field of British plant superstitions, I shall deal briefly with those of my own neighbourhood in hope that other members may be able to add to this part of my subject. Still lingering with us is the belief that the finding of an even ash, that is, one in which the terminal leaflet is absent and the leaf consequently even, is "lucky." This superstition has, however, been shorn of the fuller idea which was attached to it, and which still lingers in some parts of the country, that the finder will meet his or her sweetheart before night.

Of a somewhat similar character is that relating to the "luck" which will follow the finding of a "four leaved clover"—a superstition which still exists to a certain extent in this locality, although it seems singular that what is, after all, not so very uncommon should have been looked upon as necessarily bringing "good luck."

The custom of burning nuts at Hallowe'en is another remnant of plant superstition too well known to require further mention or detail. The practice at the same season of going into the garden and pulling a "kail stock" seems almost, if not quite, obsolete here, although I have heard it frequently spoken of. As the full ceremony has been gradually reduced it may be of interest to detail it now. After being duly blindfolded the young people made their way to the "kail yard," and pulled the first "stock" they met with. On their return to the house their trophies were examined, and by the appearance of the plant the personal beauty of the future wife or husband was divined. If the stalk was tall and straight, the future partner would be well favoured and of good proportions. On the other hand, if the stalk was short and crooked the partner would be ill favoured, and unattractive in personal appearance. The sweetness or bitterness of the pith indicated the temper of the prospective spouse, and the quantity of earth which adhered to the root was emblematic of the amount

of fortune. The final portion of the ceremony consisted in placing in order over the door the whole collection of stalks, and, as the party re-entered the house, their Christian names signified in the same order those of the husbands or wives. Where no "Hallowe'en" party was held a similar ceremony was performed by the maidens of the house.

Another custom, also indulged in at "Hallowe'en," was that of a maiden paring a potato and preserving the skin in a piece, and afterwards placing it above the door. The first man entering the house was of the same Christian name as her future husband. Another custom was to pare an apple in a similar way, but to throw the skin over the left shoulder, when the form it assumed was that of the first letter of the future husband's name.

No doubt many have heard the vague statement that the mountain ash or rowan tree has the power of keeping witches at a proper distance. This has long been familiar to me, but it is only lately that I have been able to discover that it was held in high repute in Kirkcudbrightshire, and that even within comparatively recent years it was much used in that county. It was a common custom to place a twig or small branch of this tree above the door of the byre—sometimes inside and sometimes outside. This is in accordance with the statement in Jamieson's "Scottish Dictionary" that the rowan tree thus used was "the most approved charm against cantrips and spells."

There seems also in my neighbourhood a faint recollection of the general belief among the Scottish peasantry that a twig of this tree carried in the pocket was effectual against witchcraft and the "evil eye." It was necessary, however, that one of the following couplets should be written upon a piece of paper which was to be wrapped round the twig and tied with red thread. The couplets are as follow :—

> "Rowan, ash, and red thread
> Keep the devils frae their speed."

Another was :—

> "Roan tree and red thread
> Haud the witches a' in dread."

Another, to which my attention was lately called, is given in James Grant's "Scottish Cavalier," and runs as follows :—

> "Red thread and rowan tree
> Mak' warlock, witch, and fairy flee."

Another curious instance of the use of the rowan tree as a spell against the machinations of witches in cowhouses was recently told me. In a cowhouse in Kirkcudbrightshire three pins made from pieces of the mountain ash were fixed on the inside of the door. On the centre of one of these was hung a horse shoe, and on the others the dairywoman hung various articles of attire worn while milking, such as her apron, shawl, &c., while below the wooden pins was written—"Good Luck." The virtue of the whole arrangement rested in the presence of the rowan tree, which was supposed to prevent the entrance of evil spirits, which caused the various misfortunes attached to the keeping of cows and the maladies which in this matter-of-fact age are generally ascribed to the want of proper sanitary arrangements. Another instance of the belief in the good fortune brought by the presence of the mountain ash was related to me only last week. A farmer, now dead, in the parish of Newabbey, who was deeply impressed with the virtues of the tree, used to declare that he would never allow any of those growing on his farm to be cut down. One day, however, some mountain ashes were cut down without his knowledge. On being made aware of this he was much concerned, and, in order that the good fortune might not leave the farm, he had the remains of the rowan trees inserted in a fence. Not so many years ago, at one house in Carsethorn, rowan trees are said to have been planted to bring "luck" to the man of the house who was engaged in fishing. Where a fisherman had, what is a common occurrence, a run of ill fortune, it was suggested that he should put rowan tree pins in what is known as the "halve-back"—the principal part of the frame of the halve-net. It may have escaped the notice of many that the elder or "bour tree" is very frequently found in the vicinity of old or ruined cottages. In some cases it is planted near the house, and in others used largely as hedges to the old gardens, even in situations where stones are plentiful, and where dry stone walls are the rule and not the exception. This I take to be a remnant or trace of the rather numerous superstitions, practices, and beliefs in which this tree occupied a part. Like the mountain ash, the common ash, the aspen, and several others, the elder was at one time believed to have supplied the wood of which the Cross was formed, and consequently it was at first held in great abhorrence.

It was banished from the neighbourhood of dwelling-houses, and its evil odour was said to taint any fruit with which it came in contact.

By a change in the popular ideas, the current of which seems easily traced, the estimation in which those trees of the cross were held became a high one, and the elder thus acquired a better reputation. It was planted near houses to keep off witches and evil spirits. Its branches were placed among gooseberry bushes to keep off the attacks of the caterpillar, and a piece in the form of a cross taken from a tree which grew in consecrated ground was carried in the pocket as a cure for rheumatism. In a book, published in 1884, it is said that applications for pieces of elder trees grown in some churchyards in Gloucestershire were still being made as a cure for this malady.

Another trace of plant superstitions remains in the occasional appearance of sempervivums or houseleeks, and sedmus or stonecrops on the roofs of houses. From a picturesque point of view, I much regret that these are now comparatively rarely seen, but there seems no doubt that they are an unconscious survival of the superstition, still widely current, both in England and in various parts of the Continent, that these plants will ward off lightning. This seems to have arisen from their evergreen character, and their withstanding great heat and drought betokening their resistance to fierceness of the electric fluid. This is only an instance of what is known as the "doctrine of signatures" so universally accepted by the old herbalists, and which will be found at the root of many superstitions. Since beginning this paper I have discovered that, a number of years ago, houseleeks were grown on the roofs of a cottage and a cowhouse near Kirkbean Village, the reason given for their presence being that they were "lucky" plants.

Another instance of plant superstitions was familiar to me in my boyhood, but seems to be gradually falling into oblivion. This was the belief that after the Rood Fair the evil one put his club foot on the blackberries, and made them uneatable. Probably a different date may be given in localities beyond the sphere of influence of the fair—the general belief in Britain giving October 28th (St. Simon and St. Jude's day), a Sussex version, however, making it appear that on October 10th (Old Michaelmas day) the

devil went round and spat on the fruit. In some parts of Scotland it is his cloak which is thrown over the blackberries, while in Ireland the unwholesomeness of the fruit was attributed to phooka—a mischievous goblin. So far as I can recollect, these are the only remains or traces of local plant superstitions of which I have heard, with the exception of one which is said to exist regarding planting gooseberries on graves. Unfortunately my informant could only tell me that there was some superstition regarding this, and that there is, or at least was some years ago, in Buittle Churchyard a grave on which gooseberries were planted. I have not had the opportunity of making inquiry about this.

I must now pass on to the plant superstitions of other localities, but so wide is the field that these notices must be confined to those beliefs which were British or Irish, and even with this limitation the subject must be treated in a very inadequate manner.

Another sacred plant was the aspen tree, which, in passing, I may say was ungallantly said to have its leaves formed of women's tongues, as "they never ceased wagging." The aspen was also one of the trees of the Cross, whence, doubtless the origin of its supposed wonderful powers. One curious and amusing instance of a belief in its efficacy in the cure of ague may be given. In the North of England, in the early part of this century, it was a common remedy, or supposed remedy, to take a lock of the sufferers' hair, wrap it round a pin, and, sticking the pin into this tree, to repeat while doing so—

> "Aspen tree, aspen tree,
> Shake and shiver instead o' me."

The ash tree (another tree of the Cross) has many superstitions attached to it, of which two, as related by Gilbert White, are now given. In order to cure hernia in young children an ash sapling was split and held open by wedges, and the children stripped naked were passed through. The tree was afterwards carefully plastered up with loam and as carefully swathed. If the parts again grew together a cure was supposed to have been effected. The other custom, as recorded by the same writer, was that of imprisoning a shrew mouse in a hole in an ash tree. This transforms the tree into a shrew ash, whose branches, when applied to the limbs of cattle, will relieve them of the lameness caused by a shrew mouse running over them while asleep. A

similar belief, as far at least as it extended to curing the lameness of men or horses it produced in this way, prevailed in Northumberland a number of years ago.

I must, however, hasten on and leaving other trees pass to lowlier plants, and one of the most singular of old superstitions was that in former times applied to the moonwort, to which was attributed the power of unshoeing horses which trod upon it. It was also said to open the locks of dwelling-houses if put into the key holes. Culpepper, to convince the sceptical, who seem to have existed even in his day, tells of thirty horse shoes, pulled from off the Earl of Essex's horses, which were found on White Down in Devonshire, and Du Bartas thus speaks of the superstition—

> "Horses that, feeding on the grassie hills,
> Tread upon moonwort with their hollow heels,
> Though lately shod, at night goe barefoot home,
> Their maister musing where their shoes become.
>
> O moonwort! tell us where thou hid'st the smith,
> Hammer and pincers, thou unshodds't them with;
> Alas! what lock or iron engine is't
> That can thy subtill secret strength resist,
> Sith the best farrier cannot set a shoe
> So sure, but thou (so shortly) cans't undo?"

It may be as well to mention that this and other moonwort beliefs are attached to the fern and not to the honesty of our gardens, which, by the way, is said to thrive only in gardens of which the owners possess the virtue of honesty.

A plant to which many virtues were ascribed was the rosemary, and one of the qualities it possessed was that of being a remedy for cramp. As a cure for this a sprig was taken off the plant and placed between the mattress and the tick of the bed.

What seems rather a singular class of superstitions is that which has reference to the number of flowers taken into a house for the first time for the season. I understand some of these beliefs are still current in the South of England. A curious one attached to the violet was that the number of flowers of this plant first brought home in spring betokened the number of chickens or ducklings which would be hatched that year. Less than a handful was unlucky.

To bring a single snowdrop into a house was considered unlucky, as it denoted a death in the house within the year. This is said to have arisen from the fancied resemblance of the

flower to a corpse in its shroud. The primrose, which was used to strew on graves and to place on corpses, was likewise considered unlucky—the curious thing in both of these instances being that no evil effects were apprehended if more than one were brought in at once. The following, quoted from a Devonshire paper of the year 1877, by a writer on Flower Lore, may be given as another instance of the supposed mischief which would result from bringing only one flower into a house :—" A friend was staying at a farmhouse near Christon, and one day plucked a daffodil and placed it in his buttonhole. On his return he laid the flower on the table ; but the servant coming in soon after, demanded who had brought in that daffodil, adding, " we shall have no ducks this year."

A number of violets and roses in flower in autumn is said to foretell an epidemic the following year. A piece of Yorkshire Plant Lore is as follows :—" If an apple tree has flowers and fruit at the same time 'tis a sign of misfortune to the owner." Another from the same county runs as follows :—" On finding a plant of shepherd's purse open a seed vessel ; if the seed is yellow, you will be rich ; if green, you will be poor." The following, also from Yorkshire, may be recommended as an easy way of settling a disputed point in some households :—" If rosemary flourishes in a garden, the wife will be the master ; if it dies, the master will."

The hypericum or St. John's wort is another wonderful plant possessing many mysterious powers. Few of these appear to have been chronicled as existing in Great Britain, but it is said to have been carried in some parts of Scotland as a charm against witchcraft and enchantment, and it was also believed to cure ropy milk which was supposed to have been caused by some evil influence. In olden times, too, the St. John's wort was gathered on the eve of St. John's day and hung up in windows to ward off evil spirits, spectres, storms, and thunder.

A singular belief regarding the bean is still current in some parts of England. This is, that in leap year the beans grow the wrong way, *i.e.* are set in the pods in the contrary way.

Some curious superstitions regarding the bracken are current in some parts. In Ireland it is said to be called the fern of God, from a belief that if the stem is cut into three pieces, on the first slice will be seen the letter G, on the second O, and the third D.

Another of a similar nature current in some parts of England is that the letters are the sacred ones I.H.S. In Kent again these are said to represent J.C., while in other parts the marks are said to represent the oak in which King Charles obtained refuge during his flight. In Northumberland among the many curious ideas which at one time abounded was that of the curative powers of an Irish stick. It had the power of curing cattle which had been bitten by adders or similar reptiles, and it was also held in high esteem for its virtues when applied to human beings. One instance of its remedial powers is here quoted from a Newcastle newspaper in which I discovered it some four years ago:—"Seventy years ago Weardale possessed an Irish Stick, owned by a person named Morley. A scholar at the village school had a ring-worm on her arm, and the mistress of the school rubbed the part affected with her gold wedding ring, a supposed remedy; but the wedding ring charm failed, and the girl was sent to Morley's, and a cure effected."

Another superstitious cure, in which a bush or tree was the medium, was that for whooping cough, which was believed to be cured by the following means:—The crown of the child's head was shaved, and the hair hung upon a bush or tree, when the birds would come and carry it away to their nests, and carry away the cough with it. My authority says nothing whatever as to the possibility of the young birds reared in the nest becoming afflicted with the distressing malady.

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3. *The Roman Road in Annandale.*

By Mr John Thorburn Johnstone, Moffat.

The line of the Roman road is very clearly laid down on sheet 16 of the one-inch Ordnance Survey, and can be quite easily followed northwards, on the ground, from a point on the Moffat Branch Railway, a little north-east from the Lochhouse Tower, along the hillside all the way to Little Clyde, in Lanarkshire, a distance of fully ten miles. Southwards from Lochhouse, the line is not so easily followed. Cultivation has in a great measure destroyed the traces of it in the fields. The direction of the road is such that the gradient is regular and gradual, following the

hillside in a line which, without making any appreciable deviation from the straight, steers clear of all the small hillocky ridges and valleys on the hillside, and testifies to the marvellous engineering skill and energy possessed by the ancient Romans.

Dr James M'Donald, Glasgow, who was residing here (Moffat) as a visitor for a short time last August (1892), caused portions of the road to be excavated and exposed on the Coate's Hill, Chapel Hill, and Meikleholmside Hill, and before they were filled up again I had an opportunity to examine and measure them. The results, with Dr M'Donald's permission, I am enabled to bring before the Society. The principal excavation was made on the Chapel Hill, about 400 yards north from the cross road to Evan Water. The turf was cleared from the surface of the road for a distance of eleven feet, over rather more than the width of the road. The road was found to be twenty-one feet wide, with a whinstone kerb along each side, the surface of the road consisting of a layer of small stones, similar in size to ordinary paving stones, mixed with till to fill up the vacancies. The road could not be said to have been paved. The flaying of the turf tended to disturb and destroy the appearance of the original surface, but even making allowance for that, the stones did not seem to have been laid so as to form a regular causeway. On the west side, and covering about a third of the roadway, there was an irregular layer of large stones, but, on careful inspection, these could be seen to have formed no part of the original road, but to have been laid on at some later period, probably to repair it. A transverse section was excavated at the north end of the cleared space, which shows that the road from foundation to crown is 23 inches deep, exclusive of the turf covering it, and is made up in three distinct layers—First, a foundation layer of clay, with stones bedded on its surface, six inches deep in centre of roadway and tapering to each side. The stones embedded in the clay were undressed, of various sizes, but inclined to be flat-sided, and would be pressed into the clay-bed from one to one-and-a-half inch. The clay is of a sandy nature, and is such as may be found below the shallow layers of peat moss on the Chapel Hill or neighbourhood to-day. Second, a layer of stones 11 inches deep, with the vacancies filled up with till. The stones in this layer would be, on the average, as large as a boy's head. Third, a layer of smaller stones than the above,

four inches deep, forming the surface of roadway as above. On the east side there were three of the kerbstones in position; the others on the west side have been displaced the width of themselves from the line of kerb. On the west side I did not observe any of the kerbstones in position, or, if there, they are hidden by the irregular layer of large stones already alluded to, although a few yards south from the excavation some of the kerb stones are projecting through the turf. The contour of the road, as exposed in the section, did not show a regular curve, the layer of large stones making it appear lob-sided, and spoiling its otherwise symmetrical appearance. However, a careful examination of the section reveals the fact that the line of the original surface went under the large stones and not over them, and that the original surface had been formed with a regular and symmetrical curve, and but for a slight worn-out hollow under the large stones, was still nearly perfect. I have prepared a drawing of the above section to a one-inch scale, which gives a pretty accurate view of the appearance of the section, and, as all the measurements are given on it, is self-explanatory. The photographs of the road exhibited were taken by Mr Weir, at the instance of Dr M'Donald, and give a general view of the excavation from three different points. Unfortunately the trench forming the cross section was not cut wide enough, and the shadows cast are too dark to display the section clearly.

Section at Coate's Hill.—The section exposed here was made a few yards north from the footpath over the Coate's Hill to Evan Water, and would be about a mile south from the Chapel Hill section. In construction this section is different from that on Chapel Hill. The depth is much about the same, but instead of three distinct layers there are evidently only two; but at the bottom there is a thin black line, about one inch in thickness, which has the appearance of peat moss. There was no appearance of clay anywhere in this section, and all the stones are smaller than at Chapel Hill; and the irregular layer of large stones lying on the west side of road there are here lying on the east. Dr M'Donald left the position of this cutting entirely to the discretion of the man he had engaged to excavate it, without seeing the place for himself, which was rather unfortunate, as the place selected was far too near the footpath, and had been otherwise much disturbed, so that anything like an accurate section

could not be obtained. The full width of the road only measured 15 feet as against 21 feet at Chapel Hill, and no kerbstones were visible at the sides of the excavation, but the evidence of their orginal presence was plainly visible in the row of stepping stones carrying the footpath over a marshy place in the immediate vicinity of the road, and which I have no doubt had been originally taken from it, and the reduced width of the road is also evidence that a lot of material had been taken from this part of the road at one time or another.

Section at Meikleholmside Hill.—The position of the section exposed here was about two miles north from Chapel Hill section, and about 300 yards north from the Greenhillstairs road at end of Holehouse Linn Wood. Here again the general formation of the road was different from that at the other two sections, the road here being 21 feet wide, as at Chapel Hill, but there was no appearance of kerbstones, and no evident appearance of the road having been much disturbed, and it did not show such a prominent mound in its external appearance as the other two places. The ground has a good decline to the south, and is pretty flat on each side of roadway. The road had evidently been kept in place by the sides of the cutting formed by the removal of the original soil, &c. The bottom layer at this section was eleven inches deep, and instead of resting on a bed of clay, as at Chapel Hill, the clay and stones had the appearance of having been mixed together and laid in like concrete. The stones used were also smaller, being similar to those forming the surface layer at Chapel Hill. The next and surface layer was six inches thick, formed of stones with the vacancies filled up with till, and, like the Coate's Hill, the road had been formed in two layers. At the Coate's Hill and Meikleholmside Hill the sections were not made right across the roadway full width and depth, but the turf was flayed off across the full width, and sections excavated at centre and sides of road down to the hard undisturbed till. In following the line of the road, it occasionally runs through wet and marshy places which have been drained within recent years, and at these places fair sections of the road can be seen. And it is interesting to observe that when cutting these drains the workmen, when crossing the road, have only removed the turf from the surface, while on the lower side of the road the drain is the full depth, making a small waterfall fully twelve inches high

at the side of the road at every drain. From the dissimilarity in the construction of the road, as shown by these sections, in a distance of about three miles, we may infer that in its construction the Romans used the material to do so that was lying at hand all along its course, and that nothing had to be carried or brought from a distance, the stones and clay being found in abundance all along the hill. Indeed, there are small pits all along the line of road, some of them nearly touching it, which are probably the quarries from which the stones are taken. (See page 33 "Per Lineam Valli"—by Geo. Neilson, F.S.A., and the "Antiquary," vol. 24, page 139.) The construction of this road through Upper Annandale differs considerably from other Roman roads which have been opened and examined, notably in Wiltshire in the west of England, and of those in the neighbourhood of Newcastle-on-Tyne in the North of England, and their continuation in Roxburghshire in Scotland, where the surface is always paved, and a section shows five well defined layers, "and which are in accordance with the description of road-making given by Vitruvius." But the explanation of the difference may lie in the fact that the principal and main road between the South of England and as far north as the Romans penetrated into Scotland was the east coast, and which, from its great importance, would therefore be designed and constructed to sustain a heavy and constant stream of traffic, while the road through Annandale and Clydesdale might be presumed to be one of only secondary importance as a thoroughfare, in which rapidity and ease of constructing were more essential and important than elaborateness and finish, as its principal object would be to provide facilities for keeping the hostile inhabitants of the district in check and subjection. And Mr Neilson informs me that the "road running behind the Antonine Wall is in its construction very similar to the one here; in fact, he says, they are as six to half-a-dozen."

In regard to the purpose of the large stones on the east and west side of the road at two of the sections, the examination showed that they were not part of the original roadway, and as we may justly infer that the road would be the only one in the district and would be used as such by the inhabitants for centuries after the withdrawal of the Roman hosts, and it is probable

that their knowledge of road-making and repairing was practically nil and that these stones represent their cumbrous attempts at road metalling and repairing.

17th April, 1893.

The Rev. William Andson, Vice-President, in the chair.

Donations and Exhibits.—A copy of M'Dowall's Memorials of St. Michael's Churchyard, presented by Miss Andson; the Report of the British Association for 1892; a Guide to the Cairo Egyptological Exhibit at the World's Fair, Chicago, presented by Dr Grant Bey. A whorl belonging to Mr J. F. Cormack, of Lockerbie, was exhibited.

Communications.

1. *February Weather.*

By Mr Patrick Dudgeon, F.S.A., Cargen.

A' the months o' the year,
Curse a fair Februeer.

They will have little reason to do so this year. There has been rain and snow in abundance, as well as thunder and lightning and hail.

Of all the months in the year "weather prophets" seem to have devoted more attention to February than to any other month, if we may judge by the number of old "weather prognostics" and sayings connected with it. The principal feature they have turned their attention to is a wet or a dry month, and the forecasts of a future good or bad season they deduce therefrom. These prognostics are current, and much of the same nature in every country in Europe. Of these sayings a few examples may be given in addition to the one at the head of these notes:—

If in February there be no rain,
'Tis neither good for hay nor grain.

In February o' a favoured year,
Nae puddock suld croot nor croon;
But rampin' showers o' hail and sleet
Come rakin' o'er the moon.

As good manure is February rain,
As juice does from the dunghills drain.

The French version of which is—

Eau de Février
Vaut jus de fumier.

(Rain in February is as good as juice from a dunghill.)

The Spaniards say—

Quando llueve en Hebrero
Todo el ano ha tempero.

(If it rains in February it will be temperate throughout the year.)

The Welshman had rather see his dam on her bier
Than see a fair Februeer.

Both the French and Germans have versions of this, but not so unfilial. The French is—

Vaut autant voir un loup dans un troupeau
Que le mois de Février beau.

(It is better to see a troup of wolves than a fine February.)

The Germans have—

Im Hornung sieht man lieber den Wolf, als einen Bauern in Hemdsärmeln.

(One would rather see a wolf in February than a peasant in his shirt sleeves.)

Of thunder it is said—

In February if thou hearest thunder,
Thou wilt see a summer's wonder.

The French say—

S'il tonne de Février
Il faut jeter les fûtes sur le fumier.

(If there is thunder in February it fills the barrels near the dunghill.)

Fut de fumier is a barrel used in France and Belgium for collecting the liquid manure.

Of snow it is said—

If February gives much snow,
A fine summer it doth foreshow.

The French and Italians take a different view of snow in this month—

Neige qui donne Février
Met peu de blé au grenier.

(Snow in February puts little wheat in the granary.)

The Italians say—

Néou qué toumbo al més de Febrio
Met 'en bello humou l'usurio.

(Snow which falls in the month of February puts the usurer in good humour.)

Candlemas day (2nd February, o.s. 13th) appears to have attracted the particular attention of the old weather prophets,

and numerous predictions are given regarding the weather for the remainder of the year if the day happens to be fine or wet. This particular day seems often to be taken as representative of the weather throughout the month, as many of the sayings are exactly the same applied to this day or to the month as a whole. There are several of these prognostics in Latin :—

> Si Sol splendescat Mariâ purificante
> Major erit glacies post festum quam fuit ante.

The English version of which is—

> When on the purification sun hath shined,
> The greater part of winter comes behind.

In Scotland we have—

> Gin Candlemas day be dry and fair,
> The half o' winter's to come and mair ;
> If Candlemas day be wet and foul,
> The half o' winter's gane at Yule.

In Somersetshire they have—

> The hind has as lief see his wife on her bier,
> As that Candlemas day should be pleasant and clear.

This is the same as the Welshman's deduction from the general weather during the month. In Germany they say—

> Zu Lichtmess sieht der Bauer lieber den Wolf in schafstalle, denn die Sonne.
>
> (The peasant would rather see the wolf in the sheep-fold at Candlemas than the sun.)

The principal saints' days in this month—St. Valentine, St. Matthias, St. Agatha, St. Felix, &c.—have all some particular prognostics attached to them.

The general currency of these prognostics, all pointing to much the same conclusion, made me curious to try and ascertain if there might not be some truth in them—*i.e.*, that a dry February was followed by unfavourable weather, and *vice versa*. I have only access to detailed observations extending back to thirty-three years, and they may be taken "for what they are worth." It would be interesting to ascertain if observations extending back to a much longer period in any way correspond to these late observations. The details given below, though not bearing out that these old folk-lore weather sayings are absolutely correct—this could not be expected—are, nevertheless, sufficiently near to incline one to think there may be some grain of truth in them.

The average rainfall at this station for February is 3·48 inches, and the average temperature 39·4 degs. The rainfall of less than two inches in a month has been taken as representing a dry month, and over four inches as a wet month. Curiously enough, *wet*, *dry*, and what may be termed *irregular*, seem to form a concurrent series of years. The years 1860 to 1865 inclusive have been disregarded, as they appear to form part of an *irregular* series—if there is any truth in this assumption, and only a long series of observations could settle this point. Commencing with 1866 to 1872 (seven years) we have a wet series. There is an exception here—viz., 1867—the rainfall in this year being below the average.

	Rainfall—Inches.	Mean temp. Deg.
1866...	4·43	39·5
1867...	—	43·2
1868...	7·38	43·3
1869...	8·01	44·3
1870...	5·20	37·5
1871...	5·90	42·3
1872...	6·76	43·3
Mean	6·28	41·9

An irregular series of six years follows—1873 to 1879—in which the rainfall and temperature are very nearly the average.

Then follow six wet Februaries—1880 to 1885—

	Rainfall—Inches.	Mean temp. Deg.
1880...	5·19	43·1
1881...	4·32	36·6
1882...	3·54	43·8
1883...	4·78	42·3
1884...	6·96	40·1
1885...	5·42	40·5
Mean	5·03	41·1

(The rainfall of 1882 is below the standard I have taken to represent a wet February, viz., over 4 inches.)

Then follows seven dry Februaries—1886 to 1892—

	Rainfall—Inches.	Mean temp. Deg.
1886...	1·88	34·7
1887...	1·98	39·4
1888...	·70	35·7
1889...	1·63	37·4
1890...	1·	37·9
1891...	·28	39·4
1892...	1·30	37·7
Mean	1·25	37·4

In comparing the rainfall and temperature of the months following February, only May, June, July, and August have been considered, as they are really the important and critical months of the year as regards vegetation. The mean temperature of these four months is 56·1 deg. In the first series of consecutive years we find :—

	Mean rainfall. Inches.	Mean temp. Deg.	Mean temp. of May, June, July, August. Deg.
1866-72 (7 yrs), wet, Feby.	6·28	41·9	57·1
1873-79 (6 yrs), irregular, ,,	2·90	39·4	56·8
1880-85 (6 yrs), wet, ,,	5·03	41·1	55·6
1886-92 (7 yrs), dry, ,,	1·25	37·2	55·1

The exception here as regards the mean temperature of the summer months is in the series 1880-85, when the temperature was below the average.

The temperature of February seems to have been generally disregarded in these old "weather prognostics," although there are one or two referring to it :—

When the gnats dance in February, the husbandman becomes a beggar.

The Germans have a similar one :—

Wen in Februar tanzen die Mucken auf dem Mist,
So verschliess dein Futter in de Kist.

(If in February the midges dance on the dunghill, then lock up your food in the chest.)

Generally speaking, a wet February is a mild one, unless a large precipitation is in the form of snow, which seldom occurs, the temperature is then below the average. February of this year (1893) may be taken as an instance of this, when we had a precipitation of 2·03 inches above the average, and a mean temperature of 1·2 deg. below it. There is only one instance I have in the last 34 years, viz., February, 1862, when, with a rainfall below 2 inches (1·49 inches), the mean temperature (41·6 deg.) was 2·2 deg. above it.

February fills the ditch,
Black or white (*i.e.*, rain or snow), don't care which ;
If it be white,
It's better to like.

2. *Nithsdale Willows*, by Mr James Fingland, Thornhill.

By the publication in November, 1890, of a "Revision of British Willows," by Dr F. Buchanan White, in the Journal of the Linnean Society, a fresh impetus has been given to the study of this difficult family of plants. As Dr White's "Revision" introduces a new system of classification and overturns, to a considerable extent, previous methods of classifying our willows, it is perhaps not out of place here to ascertain at least the outlines of the arrangement he adopts, and what grounds he has for making the revision.

Dr White, in his introductory part, shows how botanical opinion has undergone many changes in estimating the number of different willow species. The great variety of forms which occur in this family, and the extreme variability which characterise even the more stable forms, or those forms which are undoubtedly specific, have been a source of great difficulty to those botanists who have sought to define and classify them. When that eminent botanist, Sir J. E. Smith, in his "English Flora," published in 1828, tells his readers that he had laboured for 30 years at the task of specific definition, some idea may be formed of the extent of the undertaking. Sir J. E. Smith, in his work referred to, defined 64 species of willows. Since then the number of estimated species has fluctuated with the opinions of succeeding botanical authors until we reach the last (8th) edition of the "London Catalogue of Plants," which is understood to represent current botanical science. There are 96 forms of British willows given in this catalogue, 31 of which have specific rank, the remaining number being placed as varieties or subspecies. None of these arrangements have hitherto met the necessities of the case, nor have the definitions been comprehensive enough to embrace all the gradations of form which are found to exist.

Dr White bases his classification on a recognition of the circumstance of hybridization being an active element in causing the great variability in willows. The early salicologists, it seems, were unwilling to admit this. It has, however, been found that binary and ternary hybrids occur spontaneously. This, too, has been proved by experiment on the part of a continental botanist, Max Wichura, who has also found that by cross-fertilising these

hybrids, plants could be obtained which represented a pedigree of six species. Theoretically, it is said, every willow species may hybridize with each other; but practically the number of natural hybrids is limited owing to different periods of flowering and non-proximity of many species. In the "Revision" the number of true species is reckoned as 17, and the number of hybrids as 41 (the latter number has been added to, however, since the author published his work). Dr White defines "a hybrid in its best condition as exactly intermediate in character between its two parents; but more frequently it shows a greater relationship with one rather than with another; and in these cases where it occurs in any abundance a series of specimens can usually be obtained exhibiting a more or less perfect gradation from one parent to the other." The question of hybridity is one at present coming to the front, and there is a growing belief amongst botanists that more hybrids occur than have been hitherto supposed. A writer in a number of last year's "Journal of Botany" says he is as certain that willows hybridize with each other as that two and two make four. It is certainly very convincing when the matter has thus been tested and proved; whilst the theory most satisfactorily accounts for the multiple forms which are met with. It must have been a great labour of research on the part of the author to identify the plants described by former botanists, and to assimilate them as far as possible with his own classification when such confusion of names has existed and so many synonyms have arisen.

After a perusal of the work, I prepared to examine and collect our willows with a fresh enthusiasm, feeling certain of obtaining some information of any willow I might collect. At the close of the year 1891 Dr White very kindly undertook to critically examine my collection, which was principally gathered on the Nith between Thornhill and New Cumnock. He was delighted to discover amongst my specimens two new hybrids, one, viz., a cross between Purpurea and phylicifolia, which he had expected should occur, but had not yet met with. The plant has the leaves of phylicifolia and the stamens and scales of Purpurea. It has been named "Secerneta." The other hybrid is of an unique character, being bisexual, the lower portions of the catkins being uniformly carpellary, and the upper portion staminate. Its supposed parentage is Purpurea, Phylicifolia, and Aurita. As in

the first hybrid Purpurea is shown by the monandrous flowers; Phylicifolia by the style of the carpels and nature of the leaves; and Aurita by the shape of the leaves and pubescence, &c. It is, therefore, a ternary hybrid, and I believe possibly the first Dr White has made out for a certainty in Britain. He has named it "Sesquitertia." I was much interested to find that within thirty yards of this willow, others grew having an identical character, which suggests the possibility of its being self sown. This I should like to ascertain. I went a few days ago for the purpose of photographing this willow in flower, but was disappointed to find it had been cut down—a not unfrequent experience I have had with willows. Fortunately I had taken cuttings from it, which is always advisable to do in case of rarities. Another extremely interesting willow from the Nith was found to be a hybrid between Pentandra and alba, viz., Hexandra. I was struck with its appearance at the time of gathering as being probably a hybrid of Pentandra. It was a tree about thirty feet high, growing on the bank of the river about a mile below New Cumnock, and growing amongst abundance of Pentandra bushes. The leaves in the young state resembled the peculiar green hue of the Pentandra, a resemblance, however, which decreased as the leaves matured. Hexandra is a rare hybrid, being only known in one or at most two places in Scotland. A number of other hybrids were gathered, of which more particularly worthy of mention are Laurina, Decipiens, Undulata, and Coriacea. The most common willow to occur in Mid-Nithsdale in marshy places and river sides appears to be Lutescens. A series of forms of this willow, which is also a hybrid, were collected and examined. Already this spring I have found some very interesting and curious willows. I have had the privilege of some notes from Dr White, who has examined them in a fresh state. He is of opinion our district is extremely rich in Purpurea hybrids. I feel that I have only as yet touched the margin of our local willows, and a district is not considered done botanically until each bush is examined.

Preliminary List of Willows in Nithsdale Classified according to Dr White's "Revision."

SALIX.

× Decipiens (S. triandra × fragilis)—One bush on the Nith, near Waterside, Morton Parish (apparently wild).

× Undulata (lanceolata), S. triandra × viminalis—Old bush, right side of Laught Road from Thornhill; probably planted.

Pentandra—On the Nith between Sanquhar and New Cumnock; abundant below New Cumnock, Ayrshire.

× Hexandra (Pentandra × alba), on the alba side—Solitary tree, 30 feet high, about a mile below New Cumnock, Ayrshire; very rare.

Fragilis—A few trees in the vicinity of Thornhill. One large specimen at N.-W. end of Village.

Alba—Frequent about Thornhill and Sanquhar—often probably planted; mostly male.

× Viridis (Fragilis × alba)—A few large trees about Thornhill; probably planted.

Cinerea—Found in the district, but not good—*i.e.*, not typical.

Aurita—More frequent in the upper districts than lower.

× Lutescens (Cinirea × aurita)—Common in marshes and river sides in Mid-Nithsdale.

Caprea—Woods as at Nithbank, &c.

× Capreola (Caprea × aurita)—Above Cample Wooden Bridge, form near Caprea.

Repens—Cample Cleugh, Thornhill, and Railway Embankment above Kirkconnel

× Ambigua (Repens × aurita)—Two or three forms at Curling Pond, Thornhill.

Phylicifolia—Frequent on the Nith in Mid-Nithsdale; abundant in Upper Nithsdale.

Nigricans—Cample Cleugh.

× Laurina (S. Phylicifolia × caprea)—At Redbrows on the Nith, between Kirkbog and Holmhill—bush.

× Ludificans (S. Phylicifolia × aurita)—Near Glen Airlie Bridge, and on the Nith below New Cumnock, Ayrshire.

× Coriacea (Nigricans × aurita)—On the Nith immediately below New Cumnock, Ayrshire.

Viminalis—Common.

× Smithiana Viminalis × Caprea—Bushes above and below Cample Wooden Bridge at Tempand, Thornhill.

Purpurea—Common.

× Secerneta (hyb. nov.)—Dr White—(Purpurea × phylicifolia)—On the Nith above Glenairlie Bridge.

× Sesquitertia (hyb. nov.)—Dr White—(purpurea × phylicifolia × aurita)—Bushes, roadside, near Nith below Sanquhar, between mile-stones 23 and 22 (since cut down).

× Rubra (Purpurea × Viminalis)—Above Cample Stone Bridge, Thornhill, on river side.

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3. *Some Old Documents Relating to Dumfries.*

By the Rev. John Cairns, M.A., Dumfries.

Some time ago I had occasion to consult the *Register* of Kelso Abbey for information of which I was then in search. I found what I wanted in the preface by the learned editor, the late Professor Cosmo Innes, and I had no intention of reading anything in the body of the book, which consists of charters and other documents in contracted mediæval Latin. On looking over the Index, however, I came on the familiar name of Dumfries with numerous references after it. Some of these, I found when I turned them up, indicated documents of such antiquity and interest as well repaid the trouble of deciphering them. As they are probably the oldest existing papers relating to our town, and as they are not quoted or even referred to in M'Dowall's *History*, or any other book on the district that I have seen, I thought that a short account of them might not be without interest to the members of this Society.

A question which very naturally suggests itself at the outset is —How does Dumfries come to be mentioned in a book containing the transactions of the distant Abbey of Kelso? The answer to this question is to be found in a practice which was very widely spread in the Middle Ages, viz., the holding of the benefice of a parish by a monastery, or other ecclesiastical corporation, instead of by a single incumbent. Scotland was divided into parishes about the beginning of the twelfth century, and each parish was endowed by the lord of the manor whose boundaries it followed with a *teind* or tenth of the various products of the soil. But in many cases he or his successors bestowed these teinds on some

great abbey which kept for its own use a large part of them, and gave the rest to a deputy or *vicar*, as he was called, a priest whom it appointed to take charge of the parish in its name. In England at the present day we have a reminder of this practice in the names vicar and rector, which are applied to clergymen of the Established Church. A vicar is the clergyman of a parish whose endowments before the Reformation were in the hands of a religious house; a rector is the clergyman of a parish whose endowments have never been thus interfered with. Consequently, other things being equal, the income of a rector is greater than that of a vicar. In accordance with this practice the Church of Dumfries was, up till the Reformation, in the hands of the Abbey of Kelso, by which a vicar was appointed who attended to the spiritual wants of the parish. It would appear that—whatever may have been the practice in earlier times—this parish was latterly, so to speak, *farmed* by its priest. In a rental of Kelso Abbey, bearing date 1567, there is a list of "Kirkis and Teindis set for Syluer," and amongst these I find those of Dumfries, which brought in an annual rent of £60. Amongst the Kelso charters is the original deed of gift of the Church of St. Michael, Dumfries, to the Abbey by King William the Lion, and I think that this may lay claim to be the oldest existing document relating to our town. The grant of the Church of Dumfries, however, does not fill the whole of the charter. It occurs in the middle of a deed in which King William confirms to the Abbey all the privileges which his brother, King Malcolm the Maiden, had conferred upon it. After this confirmation, he proceeds to say that he

"adds the Church of Dumfries with the Chapel of St. Thomas in the said burgh with all that belongs to them within the burgh and without."*

In a later charter the King is more explicit. After stating that he has made this grant for the soul of his grandfather, King David, and of his father, Earl Henry, and for the weal of his own soul, and of the souls of all his ancestors and successors, he goes on to say—

"I have given and conceded to the aforesaid monks for the use and occupation of the Church of Kelso, the Church of Dumfries with lands, teinds, and all kinds of offerings, and with the Chapel of St. Thomas in the said burgh, and with the toft pertaining to that Chapel, and with five acres of land which I have bestowed as a free gift on the said Church and Chapel, and have caused to be delivered by Philip de Valon, and with all other

* Reg. Cart. de Kelso, 4.

things that rightfully belong to the said Church. Therefore, let no one be allowed in any way to alienate this Church or Chapel, or their revenues, or their privileges, from the occupation of the Church of Kelso and from the proper uses of the monks." *

The date of these documents cannot be fixed accurately to a year. King William reigned from 1165 till 1214, but the year of his reign in which these deeds were executed is not specified. There is, however, one reference which enables us to limit their date to some extent. Mention is made of a Chapel of St. Thomas in Dumfries. This Chapel stood on the Plainstones on the site, as indicated on the Ordnance Survey Map, now occupied by the premises of Mr Adams, bookbinder, and it was dedicated not to St. Thomas the Apostle, but to St. Thomas of Canterbury, better known, perhaps, as Thomas A' Becket. As is well-known, the murder of Becket in Canterbury Cathedral, by the order, or at least with the approval, of the English King, Henry II., caused a tremendous sensation in England. The murdered man was at once hailed as a martyr and a saint, and the foundation was laid for the unparalleled devotion that was paid to his relics and his memory throughout the Middle Ages. One trace of this still remains in the popularity of the name Thomas with the English speaking people, who are, I believe, the only people in the world amongst whom it can be said to be in common use. Becket was a favourite saint with William the Lion. He appears to have been personally acquainted with him, and there would be a bond of union between them in their common hostility to Henry II., who had subjected William to the indignity of signing the Treaty of Falaise, in which, as King of Scots, he acknowledged the overlordship of the English King. To the other great enemy of Henry he dedicated the magnificent Abbey of Arbroath, in which he was afterwards buried, and it is probable that it was also he who dedicated to the same saint the humbler building in Dumfries. The murder of Becket took place in 1170; Arbroath Abbey was dedicated seven years later, and probably about the same time, or a little after, the Chapel of St. Thomas at Dumfries was handed over to the monks of Kelso.

It must be noted that these deeds of gift of the Church of Dumfries which I have quoted are evidently to be distinguished from the original charter of its endowment. It will be noticed that the king speaks of lands and teinds as already appropriated

* Reg. Cart. de Kelso, 13.

to the church when he hands the latter over to the Kelso monks. The earlier transaction to which this seems to point may have taken place in the reign of his grandfather, David I., under whom the erection of our older Scottish parishes was effected; but if there was any record or deed of endowment, it has probably long since disappeared. We come, however, on what may be a trace of such an older record in a very interesting document also to be found among the Kelso charters, from which it appears that the Abbey's right to the patronage and occupation of the Church of Dumfries was not undisputed. About the beginning of the 13th century Ralph, the Dean of Dumfries, presented his nephew Martin to the living, and in support of his claim to do so produced certain charters which he had in his possession. The case went for trial before a court or board of arbitrators, consisting of the Bishop of St. Andrews and two assessors; and although the decision arrived at was in favour of the Abbey, it was to some extent of the nature of a compromise, indicating that the uncle and nephew were not without some show of a case. It is not impossible that they may have been the representatives of an earlier claim to the church and its lands which had been ignored or insufficiently dealt with when King William bestowed them on Kelso Abbey. The following is the exceedingly interesting award of the arbitrators in the case :—

"To all the sons of Holy Mother Church and faithful men who shall see this letter or hear it read, Roger, by the grace of God, Bishop of St. Andrews, William, Abbot of Holyrood, and Master Robert of St. Andrews, greeting in the Lord. When the cause that was pending between the Abbot and monks of Kelso and Ralph, Dean of Dumfries, and Martin the clerk, nephew of the said Ralph, concerning the church of Dumfries had been committed to us with full power, at length in our friendly presence the dispute was settled by agreement in these terms: If the aforesaid Ralph and Martin at any time appeared to have any right to the church of Dumfries, this right they have in our hearing entirely renounced, and the charters concerning the said church which they had in their possession they have resigned into the hands of the Abbot. Moreover, if any instrument relating to the said church should at any time be discovered they will not make use of it and it shall be regarded as totally invalid. The aforesaid Abbot and monks, however, from considerations of pity, have conceded to the aforesaid Martin the clerk, and their faithful (servant) the church of Dumfries, with the chapels of the burgh and castle, and with all that belongs to them (to be held) during his lifetime of the said monks, provided that he shall pay to the said monks each year at Kelso 20 silver marks of fixed rent, viz., 10 marks at the Feast of St. Michael and 10 marks at Easter, and shall pay all bishop's dues. But if the territory of Dumfries should be destroyed by war, the aforesaid Abbot and monks shall allow to the aforesaid Martin some abatement of his rent, according to the award of good men. This amicable agreement between the said Abbot and convent and the said Martin the clerk, which, by the authority of the Lord, we have

properly concluded, we desire to be considered (?) and to be inviolably observed. In order that this agreement may remain unimpaired we have confirmed the same by affixing our seals."*

Besides the two statements by the king of his gifts to Kelso Abbey, we have in the Register an account by the monks themselves of the same benefactions. This is specially interesting, because it contains a description of a piece of land bestowed by another benefactor, which even now, after the lapse of more than seven centuries, can without difficulty be recognised :—

Donation of King William of the Church of Dumfries.

"King William gives to us the Church of Dumfries with the Chapel of St. Thomas in the said burgh, the toft belonging to the said Chapel, and five acres of land belonging to the said Church ; *Therefore*, let it not be allowed to us to alienate this Church or Chapel and their revenues in any way whatever from the occupation of our Church and the proper uses of the brethren. Bishop Jocelin confirms the gift of the said King under the same form. Further, Laurence the Clerk, in return for the teinds of Kars belonging to the said Church of Dumfries, is to pay two shillings each year of his life at Kelso, at the Roxburgh fair. Further, Ralph the son of Dunegal, gives to the said Church a certain piece of land in Dumfries which can be thus known :—Two roads separate from one another below the town, one of which is the way to the Church of St. Blane ; the other proceeds in an easterly direction, and goes round a certain rock which is called Greneham, and then by a footpath rejoins the road from which it diverged. All the land that lies within these roads belongs to God and the aforesaid Church. Further, Adam, the son of Henry, of Dumfries, with the assent of M. his wife, gives to us those lands expressly, which he acquired by his lawful emancipation (?) in the burgh of Dumfries, viz., the lands which Robert the locksmith, Roger the shoemaker, Walter the butcher, Ralph the merchant, Alan the son of Emma, Adam Summerswain, and Alan of Bodha held of him. And he has resigned into our hands the entire right and lordship which he had in the lands."†

The most interesting passage in this document is that which describes the boundaries of the land given by Ralph the son of Dunegal, to the Abbey. There is no Church of St. Blane now, but there is a Kilblane in the parish of Caerlaverock, which occupies the site of one that once existed. Hence, the road to the Church of St. Blane is probably the Bankend road, and the road that leaves it in an easterly direction the Craigs road. Even the footpath joining the two roads is represented to-day by the footpath which runs from the Craigs road past the end of the Maidenbower Craigs and by Ellengowan to the Bankend road. I should like much to know if the name Greneham is still to be met with in the neighbourhood of the Craigs. Possibly the name of some field may still retain traces of it, field-names being often

* Reg. Cart. de Kelso, 324. † Reg. Cart. de Kelso, 11.

exceedingly ancient, and containing far more history in them than one might expect.

One more extract, also of a topographical nature, may here be added. The deed from which it is taken is a lease or feu-charter, and is entitled "Agreement between us and Henry Wytwele regarding certain lands in the town of Dumfries," and it runs as follows:—

"On the first Tuesday after the Feast of the Beheading of St. John the Baptist, this agreement was made between the religious men, the Lord Abbot of Kelso and the Convent at the same place, on the one side, and Henry Wytwele, burgess of Dumfries, on the other, viz., that the said Lord Abbot and the Convent at the same place conceded and demised to the said Henry and his assignees the whole of those lands which Malcolm, the son of Utred of Travereglis,* held from the decease of the formerly named inheritance of William, the son of Bele, with tofts and crofts in the territory and town of Dumfries . . . as they lie, viz., Between the land of St. John, which lies beside the cemetery of the mother church of Dumfries on the north side, and so by the road which leads from the town of Dumfries towards the Castle as far as the road which leads towards the Chapel of St. Laurence of Keldwood† on the south side, and so towards the east beside the Crown land as far as the Dumfries Burn which falls into the mill pond of Dumfries—these lands to be had and held by the said Henry and his assignees till the close of the life of the said Henry, of the aforesaid Abbot and Convent and their successors."‡

Then follow the terms on which Wytwele was to occupy this land, the most important of which were his payment of twelve shillings yearly at Pentecost and at the Feast of St. Martin (Whitsunday and Martinmas), and the promise on the part of the Abbey to defend his land against man and beast, and in the event of its being devastated by war, to allow him a reduction of rent.

I do not know the ancient topography of Dumfries sufficiently well to be able to explain all the references in this document. The northern boundary of the ground described is fixed by the position of St. Michael's Churchyard; the road to the Chapel of St. Laurence of Kellwood may probably find its representative in the present road to Glencaple. In that case, the Castle referred to would not be the ancient Castle of Dumfries, which occupied the site now covered by Greyfriars' Church, but the so-called "Comyn's Castle," from which Castledykes takes its name. The "Mill pond of Dumfries" might well have been connected with the old Town Mill which stood on the site of the Mill Street of our own day, and in that case, the "Dumfries Burn" (rivulus de Dunfres) would be the "Loreburn," which, after running parallel

* Terregles. † Kellwood. ‡ Reg. Cart. de Kelso, 332.

with the street which now bears its name and traversing the nursery grounds to the south of English Street, crosses the line of Queen's Place, and falls into the Nith at the Dock Park. This view, perhaps, finds confirmation in the fact that a good part of the land whose boundaries are thus indicated is still Church land, being occupied by the present glebe of St. Michael's.

Such are the most interesting of the references to the town of Dumfries in the Register of Kelso Abbey. Others might have been added relating to places in the district, such as Morton, Closeburn (always written here Killosbern, the Cell or Church of Osborne), and Trailflat, all of whose churches belonged to Kelso Abbey, but this would have unduly lengthened this paper as well as interfered with its unity. I hope, however, that enough has been said to show what an interesting field for study those old collections of charters present, as well as to dispel a little of the darkness which hangs over mediæval Dumfries.

The following is the text of the documents or the relative parts of them to which reference has been made in the foregoing paper :—

I.—Confirmatio Regis Wilielmi fratris Malcolmi eidem succedens supra concessionibus antedictis.

Wilielmus et rex, frater ejus, ei succedens confirmat omnia praedicta et addit ecclesiam de Dunfres cum Capella Sancti Thomae in ipso burgo cum omnibus earum pertinentiis infra burgum et extra. *(Reg. Cart de Kelso 4.)*

II.—Carta super ecclesiam de Dunfres et Capellam Sancti Thomae.

Wilielmus rex . . dedi et concessi prenominatis monachis ad usus et occupationenem ipsius ecclesiae de Kalchou, ecclesiam de Dunfres cum terris et decimis et omnimodis oblationibus et cum capella Sancti Thomae in ipso burgo, et cum tofta ad ipsam capellam pertinente, et cum quinque acris terrae quas eidem ecclesiae et capellae in liberam elemosinam dedi, et per Philippum de Valoniis tradi feci, et cum omnibus aliis ejusdem ecclesiae justis pertinentiis. Ita ne liceat alicui ecclesiam illam vel capellam, aut earum redditus sive beneficia ab occupatione ecclesiae de Kalchou et propriis usibus monachorum quoquomodo alienare. (*Ibid, 13 cf 411.*)

III.—Resignatio super quasdam cartas de ecclesiæ de Dunfres.

Universis sanctæ matris ecclesiæ filiis et fidelibus literas istas visuris vel audituris, Rogerus, Dei gratia, Episcopus Sanct Andreensis et Gulielmus, Abbas de Sancta Cruce et Magister Robertus de Sancto Andrea salutationem in Domino. Cum causa quae vertebatur inter Abbatem et monachos de Kalchou et Radulphum, decanum de Dunfres et Martinum clericum, ipsius Radulphi nepotem, super ecclesiam de Dunfres auctoritate amplifica nobis esset commissa, tandem in presentia nostra amicabili lis ipsa compositione quievit sub hac forma:—Prenominati Radulphus et Martinus, si quod jus in ecclesia de Dunfres aliquo tempore habuisse videbantur, ipsi juri in audientia nostra penitus renuntiaverunt, et cartas quas de ipsa ecclesia penes se habuerunt, in manum Abbatis resignaverunt. Itaque si aliquod instrumentum de hac eadem ecclesia aliquo tempore inventum fuerit, non eo utentur, sed penitus in irritum devocabitur. Predicti, vero, Abbas et monachi, intuitu misericordiae, concesserunt ipsi Martino, clerico et fideli corum, ecclesiam de Dunfres cum capellis de burgo et castello, et cum omnibus pertinentiis suis, tenendas in vita sua de ipsis monachis. Reddendo singulis annis ipsis monachis pensionis xx marcos argenteos apud Kalchou, x, viz., marcos ad festum Sancti Michaelis, et x marcos ad Pascham—et episcopalia per omnia persolvendo. Si terra de Dunfres per gwerram destructa fuerit, predicti Abbas et monachi facient prenominato Martino aliquam relaxationem de pensione sua, secundum æstimationem bonorum virorum. Hanc amabilem compositionem inter prefatum Abbatem et conventum et inter predictum Martinum clericum, anctoritate Domini proprie qua fungimur, ratam eae (?) volumus et inviolabiliter observari. Ut haec compositio illaesa permaneat, appositione sigillorum nostrorum eam roboravimus. (*Ibid*, *324*.)

IV.—Donatio Wilielmi Regis ecclesiae de Dunfres.

Wilielmus Rex dat nobis ecclesiam de Dunfres cum capella Sancti Thomae in ipso burgo, et tofta ad ipsam capellam pertinente, et quinque acras terrae eidem ecclesiae pertinentes; ita ne liceat nobis ecclesiam illam, sive capellam et earum redditus ab occupatione ecclesiae nostrae et propriis usibus fratrum quoquomodo alienare. Et confirmat ejusdem regis donum Jocelinus

episcopus sub eadem forma. Item Laurentius, clericus, pro decimis de Kars, eidem ecclesiae de Dunfres pertinentibus reddet apud Kalchou, apud nundinas de Rokesburgo, singulis annis vitae suae, duos solidos. Item Radulphus, filius Dunegal, dat eidem ecclesiae quandam terram in Dunfres quae sic potest cognosci :— Duae viae separant ab invicem infra villam quarum per alteram itur ad ecclesiam Sancti Blăani ; altera, vero, procedit apud orientem et circuit rupem quandam quae vocatur Greneham, et sic per quandam semitam revertit ad eandam viam de qua processit. Tota, vero, terra quae jacet inter has vias Dei est et prenominatae ecclesiae. Item, Adam, filius Henrici de Dunfres, ex assensu M. sponsae suae, dat nobis has terras nominatim quas ex legitima emancipatione sua adquisivit in burgo de Dunfres, viz., terras quas Robertus Lokkesmyth, et Walterus fillius Wille, et Robertus Scot, et Rogerus Sutor, et Walterus Carnifex, et Radulphus Mercator, et Alanus filius Emmae, et Adam Sumerswain, et Alanus de Bodha de se tenuerunt ; et resignavit totum jus et dominium quod in terris habebat. (*Ibid, 4.*)

V.—Compositio inter nos et Henricum Wytwele super quasdam terras in villa de Dunfres.

Die Martis proxima post festum Decollationis Sancti Johannis Baptistae, facta fuit haec conventio inter religiosos viros, dominum Abbatem de Kalchou et ejusdem loci conventum, ex parte una, et Henricum Wytwele burgensem de Dunfres ex altera, viz., quod dictus dominus Abbas et ejusdem loci conventus concesserunt et ad firmam demiserunt dicto Henrico et assignatis suis totas terras illas quas habuit Malcolmus filius Utredi de Travereglis, ex decessu hereditatis nominatae quondam Wilielmi filii Belae, cum toftis et croftis in territorio et villa de Dunfres, per omnes suas rectas subscriptas sicut jacent, viz., Inter terram Sancti Johannis quae jacet juxta cimeterium matricis ecclesiae de Dunfres, ex parte boreali, et sic per viam quae ducit de villa de Dunfres versus castellum usque viam quae ducit versus capellam Sancti Laurentii de Keldwood, ex parte australi, et sic versus orientem, juxta terram regiam, usque ad Rivulum de Dunfres quae solebat descendere in stagnum molendini de Dunfres, tenendas et habendas dicto Henrico et assignatis suis, usque ad finem vitae dicti Henrici de Abbate predicto et conventu et eorum successoribus. (*Ibid, 332.*)

4. *Notice of the Principal Scottish Antiquities in the Grierson Museum, Thornhill.*

By Dr George F. Black, Edinburgh.

Among the numerous local museums in Scotland the Grierson Museum in Thornhill occupies a foremost place, in consequence of the extent and variety of its collections. In addition to its large natural history and geological collections, it is also rich in local archæological specimens of stone and bronze, and in miscellaneous antiquities of later date. In the following paper it is purposed to put on record an account of the principal antiquities in the collection in the hope that such may be of use to local archæologists. For convenience of description, we may roughly group the specimens in the collection under the heads of *Stone*, *Bronze*, *Roman*, and *Mediæval*. It is to be borne in mind, however, that all the stone implements do not necessarily belong to what is known as the "Stone Age."*

Stone Implements.

The objects of stone consist mostly of axes or celts, perforated hammers, whorls, balls, socket-stones, &c. Of these articles the axes are the only specimens which can with safety be assigned to the "Stone Age."

Axes.—The stone axes in the collection are fourteen in number, and possess no special points of interest either in shape or finish. Of the fourteen specimens ten were found in Dumfriesshire alone, three in Ayrshire, while the remaining specimen (6) is from Aberdeenshire. One of felstone (1) found at Dalbeattie, $8\frac{1}{4}$ inches in length by 3 inches in breadth across the cutting end, is sharp-edged at the butt, and has the sides ground flat. A second axe (2) of mottled stone, found at Barndennoch, Keir, $7\frac{1}{2}$ inches in length by $2\frac{3}{4}$ inches across the cutting end, also has the butt brought to a sharp edge and the sides inclined to flatness. Another axe of this type (8), found at Terregles, has in addition an oblique cutting edge. This oblique cutting edge is generally supposed to be due to the re-sharpening of an axe which has been subject to much rough usage near one side. A fourth axe (5) of weathered felstone, found at Boreland Smithy, Old Cumnock, Ayrshire, also

* The numbers within parentheses are the numbers attached to the specimens in the antiquarian section of the Museum.

has the cutting edge oblique. The axe from Strathdon, Aberdeenshire, has also an oblique cutting edge. An axe found at Inglestone Rigg, Durisdeer, about the year 1823, approaches a chisel in form, being $5\frac{3}{4}$ inches in length by 2 inches in greatest breadth, and $\frac{5}{8}$-inch in thickness. It has the sides sharp, and is slightly imperfect. Another axe (13) of felstone, found at Barhill, Keir, 7 inches in length by $2\frac{1}{2}$ inches in breadth, has flat sides and a very sharp cutting edge. It appears to have been little, if at all, used. The cutting end of another axe found in excavating in Dumfries has been utilised as a hammer-stone—the fractured end being considerably worn by use. The butt end (14) of what has been a large axe of a characteristic South of Scotland form, was found at Durisdeer, and is also in the collection. When perfect, it must have been about 11 inches in length. A very common type of axe found in the South of Scotland, and principally in Wigtownshire, has narrow, straight, flat sides, and a butt terminating in an edge equalling in sharpness that of the cutting end. They are mostly of felstone. A fine specimen in the National Museum in Edinburgh is $12\frac{1}{2}$ inches in length.

Perforated Hammers, &c.—The implements of this class are fairly numerous in the collection, and admit of being divided into three varieties, viz.—(1) Those which show special care in the finish, and are sometimes ornamented ; (2) those of large size and mostly of rude finish, their whole condition indicating rather a utilitarian purpose than a warlike character ; and (3) those formed mostly of waterworn pebbles pierced with a half hole through the broad face. Of the first variety there are three specimens in the Museum. The first (17) an axe-hammer of gneissic stone, 4 inches in length, with a haft hole $\frac{7}{8}$-inch in diameter, has the upper end ground flat and the cutting edge purposely blunted or rounded. Round the haft hole on either face is an incised line by way of ornament. This weapon was found at Amisfield. The second (16) an axe-hammer of granite stone, is stated in the New Statistical Account of Dumfriesshire to have been found in a cairn in the parish of Tynron, somewhere about the year 1800. The *New Statistical Account of Dumfriesshire* (p. 475) states that there were two cairns examined at Tynron, each of which contained a cist and a stone-hammer. The weapon is $6\frac{1}{4}$ inches in length by $2\frac{3}{8}$ inches in breadth across the widest part, and 2 inches thick. The third specimen (18), which is a beautifully

formed hammer of white quartz, mottled with red, $2\frac{7}{8}$ inches in length by $1\frac{7}{8}$ inches in greatest breadth, presents the rare peculiarity of an oval haft hole $\frac{3}{4}$ by $\frac{5}{8}$-inch in diameter. An axe-hammer found in the Moat of Duns Castle, and now in the Duns Museum, also shows an oval haft-hole (*Proceedings Society of Antiquaries of Scotland*, vol. xxii. p. 384). Another found in the Thames, is in the British Museum. It was found on the farm of Slacks, Tinwald, and is very similar in form to a beautiful specimen in the National Museum, and which was found in Elginshire. The specimens comprised in the second variety are characteristic of the southern counties of Scotland, and more especially the south-west. They are mostly formed of diorite or other hard stone, and are thirteen in number. The largest (23) is $12\frac{1}{2}$ inches in length by $4\frac{3}{4}$ inches in greatest breadth, and has the haft-hole perforated from each side. It was found at High Kilroy. The next largest (24), found at Whitehall, Kirkmahoe, is $10\frac{3}{4}$ inches in length by $4\frac{3}{8}$ inches in breadth, and has the haft-hole partially perforated from each face. Another specimen (33) is 7 inches in length by $3\frac{1}{2}$ inches in greatest breadth, and is said to have been found in removing a cairn of stones at Auldgirth in 1862. A fourth specimen (25), $10\frac{1}{2}$ inches in length by $4\frac{1}{4}$ inches in greatest breadth, has the haft-hole only slightly begun on one face. This hammer was found at Greenhead, Closeburn. These large and heavy hammers do not appear to be of such great age as those of the first variety already described, never being found in association with any remains of early date. The third variety, comprising those formed mostly of waterworn pebbles, as already described, are most probably also of late date. Although classed as perforated hammers, yet they may have served a variety of purposes—such as net-sinkers, loom-weights, and last but not least, as old clock-weights.

Stone Ball.—The Museum also possesses a very fine, though unfortunately imperfect, stone ball (38) carved in relief, with six projecting discs or knobs. The ball is $2\frac{7}{8}$ inches in diameter, and is formed of white quartz. It was found in Cree Moss, Wigtownshire. These stone balls are peculiar to Scotland, and are more frequently met with in Aberdeenshire than in any other part of the country. Their use is unknown. From the style of ornamentation on some of the specimens in the National Museum they have been assigned to the Iron Age. A unique specimen of

bronze found in Lanarkshire is in the National Museum. Three rough stone balls (40-42) in the Museum, from 2 inches to $3\frac{1}{2}$ inches in diameter, may have been used as boiling-stones or hammer-stones.

Miscellaneous Stone Implements. — Of miscellaneous stone implements one (54) is a portion of a whetstone found in a Moss near Sanquhar on the site of a supposed lake-dwelling. Another (39) is an elliptical-shaped pebble of quartz, $3\frac{5}{8}$ inches in length, with the sides brought to an edge all round, and having an oblique groove on one face and two on the other. The implement is an Iron Age whetstone, and was found in Rashbrig Moss. These implements are not common in Scotland, and I only know of fifteen specimens, of which this is one. No. 47 is a polisher of quartz, 4 inches in length by 2 inches in breadth, with the two longest edges ground smooth. It is said to have been found in removing a cairn near Cairnmill, in the parish of Penpont, about the year 1834. Another (53) is a portion of a mould of sandstone for casting metal objects resembling a wide-toothed comb, and was found at Enterkinfoot, Durisdeer. One (112) is a hammer-stone found on the site of a crannog in Craigenveoch Loch, Wigtownshire. Four others (113-116) are socket-stones of gates, and of barley and meal mills. The larger sized socket-stones have usually a single socket, and the smaller size often have several small socket holes made by the revolution of the iron spindle of the upper mill-stone of the old fashioned mill. Such mills were in common use throughout Scotland until within the present century, and, indeed, have been in use up to the present day in Shetland. There are also in the Museum sixteen (162-177) rudely worked implements of sandstone from Shetland. These implements, which are all roughly formed, are found only in Orkney and Shetland.

Spindle-Whorls.

Whorls of stone, made to be fitted on to the wooden spindle, so as to increase and maintain the rotary motion given to it by the twirling by the fingers in spinning from the distaff, are of all periods from the first invention of the art of spinning in the later Stone Age down to the present day. In Scotland no whorls have been found with interments, but they are most commonly turned up by the plough, and they have also been found in great

abundance in the numerous brochs in the north of Scotland and in the various crannogs. The Grierson Museum possesses forty-two specimens of whorls, more or less artistic in form and finish. They are mostly formed of claystone and sandstone, and vary in diameter from 1 to 2½ inches. They have all been found on the surface of the ground, and apparently unassociated with any relics by which their age could be determined. The specimens in the Grierson Museum have mostly been found in Dumfriesshire and Ayrshire.

Flint Implements.

Of implements formed of flint there are a number of good specimens in the Museum, particularly the fine dagger-knife found on Crawford Moor.

Arrowheads.—Of flint arrowheads there are also several specimens in the collection, mostly of the type with barbs and stem. One (93) with barbs and stem, finely finished, was found at Standing Brae, Farding. Another of pitchstone (97) said to have been found in a cairn on the farm of Barndennoch, Keir, is remarkable for its very broad stem. A third (96) with barbs and stem is very regular in form, serrated on the edges, was found at Penpont.*

Knives.—A knife of flint (55) plano-convex in section, 2⅜ inches in length by 1 inch broad, finely worked along both sides on the convex face, shows traces of having been burnt in a fire. In all probability it has accompanied a Bronze Age burial. It was found in a cist in a cairn, accompanied by a quantity of burnt bones, at Barndennoch, Keir.† A leaf-shaped knife of cherty flint (136) measures 3⅝ inches in length, and is worked on both faces. It is said to have been found at Parkgate, Kirkmichael.

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* Since my communication to the Society on "The Stone and Bronze Implements from Dumfriesshire in the National Collection" (*Transactions 1887-90*, p. 207), seven additional arrowheads of flint have been added to the Museum. They are all of the type with barbs and centre stem; and were found at Riggmuir, Gretna. Three of them are remarkably fine, and with one exception they are all perfect.

† Flint knives of this type have been frequently found with interments of the Bronze Age in England (Greenwell, *British Barrows*, pp. 35, 39, 174, 285, 363, 380, 407). They have not been so frequently found or, at least, recorded in Scotland, but the following specimens have been described:—(1) Found in a cist under a cairn at Rudle, near Crinan, Argyllshire, along with fragments of a rude urn (*Proceed. Soc. Ant. Scot.*, vol. vi., p. 350, and pl. xx., fig. 4); (2, 3) two, each found with an urn at Tomontend, Cumbrae (*Scottish National Memorials, 1890*, pp. 11, 12, and fig. 15); (4, 5) two found at Largie Farm, near Crinan (*Pro. Soc. Ant. Scot.*, vol. vi., p. 343, and *note*); (6) one found in a cist at Ardyne, near Castle Toward, Argyllshire (*Ibid*, vol. ii., p. 252).

Dagger-knife.—The dagger-knife (51) is of greyish flint, $6\frac{3}{4}$ inches in length by $2\frac{1}{8}$ inches in greatest breadth, and $\frac{3}{8}$ inch in greatest thickness. On either side near the middle of its length are two small notches, probably to allow of its being securely fastened to a handle. It was found in a cairn near Glenlochar, Portrail Burn, Crawford Moor, about 1817. Dagger-knives of this form are of great rarity in Scotland, owing to the scarcity of flints of sufficient size to produce them. The National Museum only possesses one found in Mid-Lothian, and there is another in the Museum at Forres, Elginshire. A fourth, found in Banffshire, is in the possession of Cannon Greenwell.

From the sandhills at Glenluce and Stoneykirk the Museum possesses a small collection of flint implements partly collected by the late Dr Grierson himself. The collection includes an arrow-head with barbs and stem, and two of lozenge form (91), two single-edged saws (90) $1\frac{5}{8}$ inch and 2 inches in length, a knife of flint (84) $1\frac{3}{4}$ inch in length, an oval-pointed implement (85), and a number of scrapers and chips (89-92).

Beads, Rings, &c.

Of beads of glass, amber, and vitreous paste the Museum also possesses a few specimens. One (106) is a ribbed melon-shaped bead of greenish vitreous paste, found at Baitford, Penpont, by Dr Grierson. 105 is another bead of the same form, but of bluish colour, and was found at Castle Newe, Aberdeenshire. These beads are generally considered to be of Roman manufacture, and they are at all events found co-extensive with Roman antiquities. One (103) is a bead of amber found in Sanquhar Castle. Another (108) is a good specimen of a very rare and early form of a bead which is more common in the north of Scotland than elsewhere. This specimen was found at Strathdon, Aberdeenshire. Another bead (107) is of brownish yellow coloured glass, and was found at Blackwood, Keir.

Of rings there are two specimens, one of jet $1\frac{3}{8}$ inch in diameter, found in Lochar Moss in 1840, the other (100) of fine mottled jasper $1\frac{3}{8}$ inches in diameter, finely polished, found at Holestane, Durisdeer.*

* An almost identical ring of mottled jasper found in the river Lyon, near Fortingall, and a larger ring of the same material found near Inverness, are in the National Museum.

Urns.

There are no complete urns in the Museum, but there are a number of pieces of cinerary urns of the Bronze Age from various localities. Several fragments (160) of a cinerary urn found at Borland, near Old Cumnock, Ayrshire, show impressed cord markings round the rim. 179 is a fragment of an urn of food-vessel type, stated to have been found in a cairn at Newbie, near Annan, in 1864. 180 is a portion of a large cinerary urn found at Coylton, Ayrshire.

Bronze Implements.

The Scottish bronze implements in the collection are fourteen in number, and consist of six axes, four spearheads, three rapier-blades, and a ring.

Axes.—The axes of bronze found in Britain are divided into three classes—flat, flanged, and socketed. The flat axes are considered by archæologists to be the earliest, the flanged type coming next, and the socketed last in the series. Of these three forms only the second and third are represented in the Grierson Museum, there being four of the former and two of the latter. Of the flanged axes, one (1) is chisel-shaped, being $4\frac{1}{8}$ inches in length by $1\frac{1}{4}$ inches across the cutting end. The flanges are very slight, and the implement may be considered as an intermediate link between the flat and the full-flanged form. It was found in Raeburn Bog, Eskdalemuir. The second specimen (2) found at Kirkless, Durisdeer, is $4\frac{3}{8}$ inches in length by 2 inches across the cutting face, which is semi-circular in outline. The flanges in this specimen are well developed, and are fusilform in outline. The third specimen (3) found at Townfoot Loch, Closeburn, in 1869, is $5\frac{1}{4}$ inches in length by $2\frac{1}{8}$ inches across the cutting edge. This specimen has a well-defined stop-ridge across the middle of each face, and is ornamented below each ridge by a semi-elliptical moulding. The fourth flanged axe (4) found at Park of Closeburn is the finest of the series. It measures $6\frac{1}{4}$ inches in length by $3\frac{1}{4}$ inches across the cutting end. Below the stop-ridge on each face is a series of vertical ribs extending downwards about $\frac{3}{4}$ of an inch, probably produced by hammering. Each flange is also ornamented by facets, eight on each. Of the socketed axes (6) found at Auchencairn Hill, Closeburn, in 1859, is the finest. It measures $4\frac{5}{8}$ inches in length by $2\frac{1}{2}$ inches across the cutting

edge, and is ornamented down each face by four slightly raised vertical ribs. It has the usual loop found on the axes of this type, and is very finely patinated. The second socketed axe found in Ayrshire (5), is of reddish bronze, and measures $3\frac{1}{4}$ inches in length by 2 inches across the cutting edge.

Spearheads.—Of these there are four specimens. The largest (7) is of plain leaf-shape, $12\frac{7}{8}$ inches in length, and is slightly imperfect at the socket. It was found on the farm of Springfield Hill, Dunscore. The second (8), which is more of the form known as "Lancehead," measures 5 inches in length, and has a loop for attachment to the shaft on opposite sides of the socket. It was found at Spearford Bridge, Crossmichael, Kirkcudbrightshire. The third specimen (9) is also of lancehead form, and was found at Bowhouse of Caerlaverock. It measures $5\frac{5}{8}$ inches in length, with a loop on each side of the socket, and is imperfect at the point. The fourth and last spearhead (10) has been originally about 6 inches in length, but it is now much broken and incomplete. It was found with a flattish circular bronze ring (11), $2\frac{1}{4}$ inches in diameter, in the parish of Tinwald.

Rapier-blades.—The three rapier-blades (12-14) in the collection are part of a hoard of twelve or thirteen specimens found together in the parish of Kirkgunzeon, Kirkcudbrightshire, about the year 1840. These and other three specimens are unfortunately all that are now known to be in existence. In Dr Grierson's MS. catalogue of his collection he states that he made drawings of all the principal specimens at the time they were found. A search among the doctor's papers by Mr J. R. Wilson for these drawings has, however, met with no result. This is much to be regretted, as this find of weapons is one of the most important pertaining to the Bronze Age in Scotland. Of the three specimens in the Museum the largest is $15\frac{1}{4}$ inches in length, the second $14\frac{1}{2}$ inches, while the third, which is imperfect at the point, is now only $8\frac{1}{2}$ inches in length. All three are slightly imperfect at the butt ends. These rapier-blades are not common in Scotland, the National Museum in Edinburgh only possessing five, the largest of which is only $12\frac{1}{2}$ inches in length. One of the five in the National Museum was found at Fairholm, Lockerbie. A magnificent specimen of $30\frac{1}{4}$ inches in length, and perfect, was found in County Derry, Ireland.

Roman.

The only object of Roman origin in the Museum found in Scotland is the very fine bronze patella or short-handled saucepan. The vessel is 6½ inches in diameter, and 4 inches in depth. Springing from the rim on one side is a short straight broad handle, the extremity of which is pierced by a circular opening. The vessel has been tinned inside. It was turned up by the plough on the farm of Auchenskeoch, Durisdeer, and is stated to have been accompanied by two "goblets" and two bronze "plates." The two "goblets" and the two "plates" were destroyed shortly after their discovery—having stupidly been given to children as playthings. Two similar specimens of Roman patellæ were found in 1790 in forming the turnpike road from Dumfries to Sanquhar, and about a mile from Friars' Carse. They were figured and described in a paper by Robert Riddell of Glenriddell, read before the Society of Antiquaries of London in 1793.* One was perfect and held about a quart, and bore on the handle the maker's name, which appears to have been Ansiepharr. The second was broken and imperfect. Nothing is now known of their existence.

Coins, Medals, Etc.

The Scottish coins are not numerous, nor with one exception of any great importance. The exception is a gold demi-lion of Robert III., weighing 19½ grains. The legend on the obverse reads—"robertus d.g.r. scotor;" and that on the reverse—'xpc regnat xpc vin." "Christ reigns, Christ conquers," &c., was a favourite inscription on French coins, and was also used on some Scottish coins, with the difference that *regnat* was improperly put before *vincit*. Of the other coins, the principal are—Groats of David II., Robert II. and III., and a Crookston Dollar of Mary and Darnley.

Of copper coins and tokens there is a large and miscellaneous collection, mostly belonging to Britain and the Colonies. The British tokens are mostly English, and were current in London, Manchester, Birmingham, Liverpool, Sheffield, Coventry, &c. The Colonies represented among the tokens are Canada, Nova Scotia, Australia, West Indies, New Zealand, Tasmania, India,

* *Archæologia*, vol. xi., p. 105, and pl. viii.

Ceylon, Channel Islands, &c. There are also a number of coins of silver and copper of France, United States, &c., and a few paper notes of various countries.

The medals are ten in number. The first (59) is a common brass medal commemorative of the Battle of Culloden, 1745, with the Duke of Cumberland on horseback on the obverse, and a view of the battle on the reverse. The second (60) was struck on the jubilee of the accession of George III. and Queen Charlotte in 1809. Another (61) was struck on the occasion of the visit of the Emperor of Russia, Alexander I., to London, after the Treaty of Paris in 1814. The last which may be mentioned is one (63) commemorative of the founding of the Dumfries and Maxwelltown Observatory. On the obverse is a view of the Observatory, and the inscription—"DUMFRIES AND MAXWELLTOWN OBSERVATORY;" on the reverse, within a wreath, the inscription—"GENL. SHARPE M.P. 2 SHARES, NO. 91 & 197."

The Communion tokens are sixteen in number, three of which are duplicates. The oldest is of Morton Parish Kirk, and is dated 1718. The next oldest is of Closeburn Parish Kirk, and is dated 1721. It had been struck during the incumbency of the Rev. John Lawson, who was minister of the parish for a period of forty years. The next is of Kirkbride Parish, and bears the initials of Peter Rae, minister here, from 1703 till his translation to Kirkconnel in 1732. It is dated 1725. The fourth and fifth are of the Parish of Kirkmahoe. One is dated 1725, and was probably struck on the admission of Edward Buncle, formerly of Lochmaben, presented to the parish in April, 1725, and admitted the following September. The other is dated 1777, and had been struck during the ministry of the Rev. Archibald Lawson, son of the Rev. John Lawson, of Closeburn. The sixth is of Dumfries, and is dated 1773. The last which may be mentioned is one of the United Parishes of Tinwald and Trailflats. It bears the initials T. & T., and the date 1787. The parishes were united in 1650.

Arms and Armour.

The arms and armour in the collection consist of a miscellaneous lot of swords, daggers, flintlock pistols, muskets, etc., of no particular value. Among the swords is one (23) from Spain, bearing on one side of the blade the following inscription: "NO. ME . SAIVES . SIN.RASON"—"Draw me not without reason.

On the other side is "NO . ME.ENBAINES . SIN . HONOR"—"Resheath me not without honour." There are also in the Museum four of the old war scythes with which a number of the inhabitants of Dumfries were armed at the time of the Rebellion in 1715. These scythes are mentioned in the *History of the late Rebellion*, written by the Rev. Peter Rae, minister of Kirkbride, and published in 1718, as follows:—"And likewise considering that they had not Arms for all the Inhabitants who were fit for Service, the Magistrates and Council bought up 100 *Syths*, caus'd streight their Docks, and fix'd them sufficiently on Shafts, delivering them to such of the Inhabitants as had least skill of Fire-arms, and added a certain Number of these *Sythmen* to every Company, to be employ'd at the Barricades, and especially in the *Trenches*, which were now carrying on with all Expedition, as we shall afterwards hear."*

Pottery and Porcelain.

The Museum possesses a very fair collection of pottery and porcelain from various countries, the greater part, however, being English ware. The latter consists of portions of tea-sets or single specimens of Crown-Derby, Derby-Chelsea, Worcester, Salopian, Davenport, Lowestoft, and other manufactures, including a considerable number of specimens of the elder Spode. A cup and saucer (16) resembling Lowestoft ware are said to have once belonged to Old Mortality. A jug of white stoneware, $6\frac{3}{4}$ inches high, bears on the one side the Farmer's Arms and the mottoes, "God Speed the Plough" and "In God is Our Trust." On the opposite side are the following lines:—

"Let the Wealthy and Great
Roll in Splendor and State,
I envy them not, I declare it;
I eat my own Lamb,
My own Chickens and Ham,
I shear my own Fleece and I wear it.
I have Lawns, I have Bowers,
I have Fruits, I have Flowers;
The Lark is my morning alarmer—
So Jolly Boys, now—
Here's God Speed the Plough,
Long Life and Success to the Farmer."

* "The History of the late Rebellion, rais'd against His Majesty King George I., by the Friends of the Popish Pretender, &c. By a Lover of the Prosperity and Peace of Great Britain," 4to Dumfries, MDCCXVIII., p. 272. The second edition, printed in London in 1746, bears the author's name on the Title Page.

Another jug, 8½ inches in height, bears on one side a portrait of Admiral Duncan, and "ADMIRAL LORD VISCOUNT DUNCAN." Below the portrait are the following lines :—

"Long as the Sea shall fence our envi'd Land,
Long as our Navy shall that Sea command ;
So long shall Admiral Lord Duncan's name,
Be grav'd by Memory on the Rock of Fame ;
The Page of History shall his Deeds repeat,
With Britain's Triumph and the Dutch defeat."

On the opposite side of the jug are a number of Masonic emblems, and the words—

"The World is in Pain
Our Secrets to Gain ;
But still let them wonder and gaze on,
For they ne'er can divine,
The Word, nor the Sign,
Of a free and an accepted Mason."

MANUSCRIPTS.

The manuscripts in the collection are not numerous, nor of any great importance. The following are the most interesting :— (1) A grant of a piece of land by the Duke of Queensberry for a meeting house in Thornhill, dated 10th February, 1784; (2) a letter from the Earl of Glasgow to the Laird of Dornock, dated August 29th, 1708 ; (3) a letter of invitation to attend the funeral of one drowned in the Nith on Candlemas night, 1773 ; (4) a letter from David Haggart to his wife, dated at Dumfries, October 6th, 1820; (5) a copy of a Gretna Green marriage certificate, which reads as follows, the names of the contracting parties being illegible* :—

KINGDOM OF SCOTLAND.
COUNTY OF DUMFRIES.
PARISH OF GRETNA.

These are to certify to all whom these presents shall come that——from the Parish of——in the County of——and——from the Parish of——in the County of——being now here present, and having declared themselves single persons, were this day married after the manner of the laws of the Church of England, and agreeable to the laws of Scotland.

As witness our hands.

* The writer of the *Old Statistical Account* of the Parish of Gretna gives a slightly different and barbarously spelled copy of the marriage certificate, as follows :—"This is to sartfay all persons that may be consernid, that A. B., from the Parish of C., and in County of D., and E. F., from the Parish of G., in the County of H., and both comes before me, and declayred themsells both to be single persons, and now mayried by the forme of the Kirk of Scotland, and agreible to the Church of England, and givine ondre my hand, this 18th day of March, 1793."—*Old Statistical Account*, vol. ix., p. 532.

(6) Ground plans of Morton Castle, Tibbers Castle, and of the existing remains of Sanquhar Castle. A few instruments of Sasine, old newspapers, early almanacs, &c., make up the remainder. Among the manuscripts is the following curious account of the funeral expenses of a woman who died in 1810. The account is interesting as giving an insight into the private life of the poorer classes in the days of our grandfathers; and is further interesting as giving the prices of some articles in daily use eighty years ago. It is as follows :—

	Augt. 23, 1810.
1 Gall. 13 Gills Whisky, 9s	£0 12 8
1 Gall. Rum	0 15 0
3 lb. fine Sugar, 1s	0 3 0
½ lb. fine Tea, 7s	0 3 6
28 Funeral Letters, 1d...	0 2 4
9½ lb. Com. Cheese, 4½d	0 3 7
2 Dozen Pipes, 3d	0 0 6
3 oz. Shagg, 4½d	0 1 1½
2 lb. Soft Soap, 8d	0 1 4
¼ lb. Soda, 8d	0 0 2
1 lb. Brown Soap, 10d	0 0 10
Paid Jas. M'Call, Grave Diggin, Mortcloth, &c. ...	0 8 0
4 Wine Glasses...	0 2 0
Total	£2 14 0½
4 Wine Glasses retd.	0 2 0
	£2 12 0½

In the case beside the manuscripts is the Prayer Book of Sir John Ross, the Arctic Explorer, carried by him on his voyages. It contains numerous markings in the handwriting of Sir John Ross, and also the following note :—"This Prayer Book has accompanied me in the *Breseis*, *Astoria*, *Driver*, *Isabella*, *Victory*, and *Felix*.—John Ross."

Relics of Robert Burns.

The Museum contains a number of relics of Robert Burns, many of which are of considerable interest. Chief of these is the poem of "The Whistle," in the handwriting of the Poet, along with a letter of Gilbert Burns, in which the poem was enclosed to Dr Grierson's father in 1815. There is also an Excise Permit filled up by the Poet, and dated Dumfries, 13th November, 1792. Of relics said to have been used by the Poet, and believed to be authentic, are the following :—Two drinking glasses, three wooden punch ladles, a fishing reel, said to have been given by Burns to John Ferguson, shoemaker in Closeburn,

whose son, James, gave it to John Kellock in 1844, by whom it was presented to the Museum; a Psalm Book given by the Poet to his second cousin, Sara Burness; and two small silver teaspoons. There is also the fiddle of James Humphrey, the noisy polemic commemorated by Burns. Framed and hung on the walls of the Museum are the original working plans of the Mausoleum in Dumfries, drawn by T. F. Hunt, architect, in 1815. Among the manuscripts preserved in the case are letters of Gilbert Burns, Sir Walter Scott, Allan Cunningham, and others connected with the erection of the Mausoleum; and also the minute book of the Dumfries Burns Mausoleum Committee, with a copy of the first minute book of the Dumfries Burns Club attached. The letters have already been printed in the *Transactions* by Mr J. R. Wilson, of Sanquhar.

Spinning.

The art of spinning with the distaff and spindle is of great antiquity, and appears to have been practised throughout almost the whole world from the earliest times down almost to the present day. Till the introduction of spinning-wheels the implements used were the distaff, spindle, and whorl, specimens of which are in the Museum. The distaff or "rock" was a staff of wood from eighteen inches to two feet and a half in length, one end of which was squared to hold the prepared lint or tow from which the spindle was fed as required. The latter was a stick about 8 to 10 inches in length, circular in section, and about half an inch thick at the middle, from which it tapered off towards either end. The spindle was weighted with a whorl of wood or stone, generally the latter, to act as a fly-wheel to the spindle when twirled, and by its weight to assist in drawing out and twisting the lint on the distaff into thread. When spinning, the distaff with the lint was stuck into the spinner's girdle and projected upwards under the left arm, thus leaving the two hands free to work with the spindle. In a small work in rhyme called *The Piper of Peebles*, published in 1794, we have an interesting account of this manner of spinning, which may here be noted :—

> "Twa hunder year, or mair sin syne –
> Fan fashions werna near sae fine.
> * * * * *
> Fan wives wi' rocks an' spindles span.
> * * * * *
> Fan lasses, wi' their rocks set out

To ane anither night about—
Wad gane a mile o' grund an' mair,
Sometimes no' very free o' fear,
To hear auld stories ilka night
In winter, fan there was moonlight.
Upo' their spindles near the tap,
They biggit ay a bulgy knap
O' thread, cross-brath'd, firm to defend
The rest frae reav'ling o'er the end.
Sometimes they strove, an them that wan,
Ay thought they first deserv'd a man.
To save their plaiden coats, some had
Upo' the hench a bonnet braid
Of an' auld wecht, or kairding skin,
To rub an' gar the spindle rin,
Down to the ground wi' twirling speed,
An' twine upo' the floor the thread;
An' some their right-side cleas row'd up,
An' snoov'd upo' the nakit hip.
Lang ainna nights they counted half
Done, fan the coost their whorles aff.
They row'd their yarn upon hand reels,
Afore the use o' spinning-wheels—
Tell'd ilka cut that they ty'd up,
By double down comes, jig, an' whup,
An' scores, an' so forth, as exact
As reels can count, that's made to chack." *

Burns in his first epistle to John Lapraik describes a gathering of young people such as that mentioned above as a "Rockin'"—

"On fasten e'en we had a rockin',
To ca' the crack and weave our stockin'."

The Museum also possesses two hand-reels for winding the thread into hanks as mentioned above. The late Dr Grierson informed Sir Arthur Mitchell that the old women about Thornhill, as they wound the yarn on the reel, were in the habit of repeating the following words :—

"Thu's yin,
Thu's no yin,
An' thu's yin a' oot.
Thu's twa,
Thu's no twa,
An' thu's twa a' oot."

And so on, as each strand of the cut was completed on the reel. Others, according to Dr Grierson, repeated words which sounded something like :—

"Corny MacCrib,
Caffy MacCrib,
Gilmic—thu's yin.
Corny MacCrib,
Caffy MacCrib,
Gilmic—thu's twa."†

* "The Piper of Peebles: A Tale," by the Lambleader [William Anderson, Schoolmaster, Kirriemuir]. 12 mo. pp. 20; Dundee, 1794, pp. 6, 7. Another edition, also in 12 mo., was published in Forfar in 1823.

† *Proceedings Society of Antiquaries of Scotland*, vol. xii., pp. 275, 276.

Mediæval and Miscellaneous.

Of mediæval and miscellaneous objects in the Museum worthy of mention are the following :—A tripod ewer of brass, 8 inches in height, found in Buchan Peat Moss, Keir. Similar specimens have already been described in the *Transactions* of the Society.*

Two tripod pots of brass, one 7½ inches high, found in a peat moss at Appin, Tynron; the other found in a peat moss at Drumbuie, Kells, Galloway. A third pot, also of brass, had a long projecting handle on one side, and was found in Lanarkshire. Two old wooden spades, one with triangular head, found at Merkland, Dunscore, and the other at Closeburn. A flail (32) said to have been used by the Covenanters in the skirmishes at Dalry and Bothwell Brig; a crusie or lamp of wrought iron (39) from the island of Gigha, Argyllshire; an iron support (38) for a baptismal basin, formerly used in the old church of Morton; two old wooden mills (27, 28) for grinding spice, as used in country districts till within recent years; three old iron keys, one from the old church at Dumgree, Annandale, the second from Penpont Church, and the third from Kirkcudbright Castle; another old folding key of iron with curious wards; a finger ring of zinc, enclosing a thin strip of copper, formerly worn as a cure for rheumatism; the seal of the Royal Dumfries Yeomanry; portion of lead piping from Drumlanrig Castle, showing the amount of corrosion after being embedded about thirty years in a clay soil; two halves (41) of a stone mould for casting communion tokens of Quarrelwood Reformed Presbyterian Church; a quilting-pin (91) for working borders for women's caps; half of a mould or cam (89) for shaping horn spoons, from the Lewis, Hebrides; a horn spoon (71) and a walking-stick (139) said to have belonged to James Renwick, the last of the martyrs of the Covenant, executed in 1688; a pair of old handcuffs (78) said to have been used on David Haggart; walking-stick (138) said to have belonged to Patrick Hamilton of Dalswinton; a large Highland Sporran (33) with brass clasp; an old clock with engraved brass dial, made by Alexander Rae, "Drumfries"; a Tally-stick or reckoning of hill drains on the farm of Glenmaddie, Sanquhar, as kept by the workmen; portion of an old floor-tile, found in Closeburn; teapot, cup and saucer, a small bowl, and a "craggan"

* *Transactions*, 1887-90, p. 52; 1891-92, p. 99.

(141) of rude ware made within recent years in the Lewis; oval brass badge of the Nithsdale local militia. There is also a small collection of specimens of hand-made lace from England, France, and Italy. A few pieces are old, but not of any great value. The most interesting is a small piece of French Nun's or Valenciennes lace, the mesh of which is plaited throughout.

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5. *Latin Notes.*

By Edward J. Chinnock, M.A., LL.B.

In the course of my reading I have recently come across the following peculiar expressions and words, of which I find no notice in the dictionaries :—

1. Adremigare, *assist in a sea battle.* Florus ii., 8, 12 :—Classis regia Polyaenidae Annabalique commissa, duce Aemilio Regillo, *adremigantibus* Rhodiis tota laceratur.

2. Cautus, *safe.* Ammianus xxii., 1, 3 :—Nee enim *cautum* ducebat conjecturis credere, forsitan in contrarium erupturis.

3. Ergastuli detrimenta, *off-scourings of a workhouse.* Curtius v., 18 :—Liberi in flore et aetatis et rerum agnoscent patres *ergastuli detrimenta?*

4. Interrogatiuncula, *a short examination.* Ammianus xxix., 1, 25 :—Primo introvocatu post *interrogatiunculas* leves Pergamus a Palladio, ut dictum est, proditus.

5. Maris otia, *seaside holiday resorts.* Florus i., 16, 4 :—Nihil hospitalius mari : hic illi nobiles portus Caieta, Misenus, tepentes fontibus Baiae, Lucrinus et Avernus, quaedam *maris otia.*

6. Morator, *a marauding straggler.* Curtius iv., 40 :—Sed Persarum *moratores* erant, mille ferme, qui speciem magni agminis fecerant.

7. Peculiariter, *as private property.* Ampelius, 20 :—Fabii bellum Veiens *peculiariter* sibi depoposcerunt. This meaning is assigned to the word by the great jurist, Paulus (Dig. 41, 2, 3).

8. Repagulum (in the singular). Ammianus xvi., 12, 38 :—Igitur cum equites nihil praeter fugae circumspectantes praesidia vidisset longius Caesar, concito equo, eos velut *repagulum* quoddam cohibuit. This word is frequently used by Cicero, but only in the plural, *bolts, bars, restraints.*

9. Rumorum aucupes, *pickers up of rumours, eaves-droppers.*

Ammianus xv., 3, 3 :—Unde *rumorum aucupes* subito exstitere complures, honorum vertices ipsos ferinis morsibus adpetentes, posteaque pauperes et divites indiscrete. Compare Plautus (*Miles gloriosus*, 4, 1, 9).

10. If either *serpentiferam* or *sarmentiferam* are the right reading in Virgil's Ciris, 477, serpentifer *snake-producing*, or sarmentifer *brushwood bearing must* be inserted in the Latin dictionaries as new words :—Prospicit incinctam spumanti litore Cythnum, marmoreamque Paron, vidiremque adlapsa Donysam Aeginamque simul serpentiferamque Seriphum. I have been favoured by receiving the following note from Dr Robinson Ellis, the famous Oxford Latinist, on this point :—"In *Ciris*, 477, the MSS. give *salutiferamque* or *sementiferamque*. *Serpentiferamque* is a conjecture of Scaliger's. R. C. Jebb, in a letter he wrote to me on the passage, conjectured *sarmentiferamque*. This might agree with the modern description of Seriphus in Bent's "Cyclades," p. 6. "The island, except near the town, is bare; for at this time of year the vineyards were brown, and the long straggling vines, which in this island are trained along the ground to get what protection they can from the summer winds, do not in winter present a very lovely appearance." (See "American Journal of Philology," viii., p. 13.) But I am quite uncertain as to the right reading, and the MSS. are wretched." Trinity College, Oxford, May 29, 1892. Bachrens prints the *Ciris* in his edition of Catullus, and reads *serpentiferam* with Scaliger. The poem is supposed to be one of Virgil's early works. Some ascribe it to Cornelius Gallus, a famous poet of the Augustan era, whose works have perished.

11. The word *status*, evidently the origin of the French *état* and our *state* has never, so far as I am aware, in Classical Latin the meaning of *state* in the sense of *commonwealth*. It seems, however, to bear this meaning in Ammianus Marcellinus iii., 8, 11, in the letter of Julian to Constantius, explaining his reasons for having assumed the title of Augustus, and defending his course of action :—Et conditionum æquitatem, quam propono, bona-fide suscipito, cum animo disputans, haec *statui Romano* prodesse, nobisque qui caritate sanguinis, et fortunæ superioris culmine sociamur. This seems to be the earliest use of the word in the sense of *republic*, now one of its common meanings.

12. *A socco ad cothurnum ascendere* (to mount from comedy to

tragedy). Appuleius (*Golden Ass.* x., p. 238) :—Jam ergo lector optime, scito te tragoediam non fabulam (comedy) legere, et a socco ad cothurnum ascendere.

13. *Articuli palmarum* (the wrists). Appuleius (*Florida* p. 351) :—Chlamyde velat utrumque brachium adusque articulos palmarum.

12*th May*, 1893.

Mr Thomas M'Kie, Vice-President, in the chair.

Donations.—Records of Scotch plants for 1892, by Mr Arthur Bennett; Immigrant Plants in Los Angeles County, California, by Dr A. Davidson; Climate and Floral Regions in Africa, by Mr G. F. Scott-Elliot; Report of the Berwickshire Naturalists Club, 1890-1; Essex Naturalist, January March, 1893; Report of Marlborough College Natural History Society, 1892; Report of the Smithsonian Museum for 1890; Report of the Bureau of Ethnology, Washington, 1885-6; the Dakota-English Dictionary, from the United States Geographical and Geological Survey Department; the Bibliography of the Athapascan Indians, from the Smithsonian Museum.

Communications.

1. *A Note on the genus Apion.*

By Mr W. D. Robinson-Douglas, M.A., F.L.S., Orchardton.

Among the genera of our native Coleoptera two stand out pre-eminent for the large number of the species they contain, and it might be added for the smallness of the individuals themselves in each case. These genera are *Homalota* among the *Staphylinidæ*, and *Apion* among the *Rhynchophora*. The latter one, and how far I have found it represented here, is the subject of the following slight note.

Not only is the genus numerous, but it is also widely distributed, chiefly in the temperate regions, and also, so it is said, more especially in districts bordering the sea than far inland. The European fauna possesses some 250 species. Of these about 75 are British, and among these again my not very careful researches here have yielded 23, a number which, I am sure, with more

attention and knowledge, might be easily increased, as the nature of the ground and the needed food-plants are favourable. As already said, the species are small, some very small. They are as a rule pyriform, that is pear-shaped, which rather obvious similarity has indeed given them their generic name, from a Greek word, meaning a pear. In colouring they are mostly black or metallic, dark blue or green, but a small section is red, and a few others are variegated. Some also have red, or partially red legs, the majority have black. They feed principally on leguminous plants, and amongst these *Vicia* and *Trifolium* (otherwise vetches and clovers) are extremely frequented by them; this brings a good many of the species under the observation of agriculturists, and into the black list of noxious insects, as their depredations are sometimes very severe. As a rule I think the most destructive species are fairly at home in a variety of such plants, so that when any strong measures are taken against them in the open field they can retire to similar plants in the hedgerow or at the dyke-side, and reside there ready for a fresh descent on the crops. Other of the species (and these naturally the rarer ones) seem to be very fastidious as to their favourite food, and to be limited to special plants. Those who may wish to learn a little more about the often vast destruction these tiny weevils can produce on clover and vetch crops, by force of numbers and voracity, as well as the means suggested for their being kept in check, will find full details in the works of Curtis, Miss Ormerod, &c. It should be added to any notes on Apion that one of the Fathers of British Entomology, the late Rev. W. Kirby, made the genus a special study, and published an excellent monograph many years ago, which, though later researches have altered many of his conclusions, still witnesses to his interest in these little weevils. I append a few notes on those taken by me here :—

Apion cerdo Th.—Exclusively on *Vicia cracca*; rather common; its European and British distribution point it out as a rather northern insect; nowhere very abundant.

A. carduorum (Kirby)—Abundant on thistles, alike in this country and Europe; very variable in size.

A. ulicis (Forst)—Very abundant on whins, especially in spring; often swarming on the early days of warm sunshine; extends throughout Europe and North Africa.

A. striatum (Marsh)—Not uncommon on broom, and sometimes on whins, found throughout Europe ; it has a specially pear-shaped form.

A. immune (Kirby)—A very similar but smaller insect, much less common ; on broom also, and generally distributed.

A. simile (Kirby)—The rarest of the *Apions* I have taken here ; it seems by no means common anywhere in Europe, and its food plant is not certain, though it seems to occur generally on birch.

A. vicice (Payk)—Another species confined to *Vicia cracca*, and common here ; though it is a local species its distribution is wide in Europe.

A. apricans (Herbst)—*fagi* (Kirby)—Here we come on one of those in the black list of destructive insects. This little partially red-legged species is the clover foe among beetles, and is only too abundant throughout this country and Europe, with North Africa and North Asia.

A. assimile (Kirby)—Closely allied to the last, and equally hurtful, and widely spread.

A. nigritarse (Kirby)—Another red-legged and clover feeding species, but much less common here, though its general record is common ; it is a more southern insect.

A. flavipes (F.)—*Dichroum* (Bedel)—This, like the last, is wholly red-legged ; it seems most partial to white clover, whereas *A. apricans* is generally on red clover ; all the four are alike in appearance and voracity.

A. punctigerum (Payk)—This is found on *Vicia cracca* and *sepium*; it seems rare here, and not common anywhere, though found throughout Europe and North Africa.

A. virens (Herbst)—A common clover-feeding species, widely distributed, and rather injurious.

A. Gyllenhalii (Kirby)—Rare here, and generally local, though sometimes abundant where it occurs ; it is found in most parts of Europe, has been taken in profusion in the south of Ireland, and is an inhabitant of *Vicia cracca.*

A. ervi (Kirby)—Common throughout the summer on *Lathyrus pratensis* and species of Vetch, sometimes too much so ; generally spread in Europe.

A. æthiops (Herbst)—Rarer, but not very scarce, found in Europe and North Africa; said to be taken on fruit trees as well as on *Vicia*. A closely allied species *A. pisi* (*F.*) is one of the very commonest of the genus, and yet rather curiously I have not met with it here as yet.

A. Spencei (Kirby)—Rather common here, and not rare in Europe generally. It is one of the species almost, if not quite, limited to *Vicia cracca*.

A. frumentarium (L.), *hæmatodes* (Kirby)—The only one of the entirely red species I have taken here. It is common enough, especially on dry banks or sand-pits, and I believe its general distribution is very wide, extending beyond the limits of the European fauna. It feeds on the sorrel.

A violaceum (Kirby)—This common, rather brightly metallic species, is found on many kinds of *Rumex*; in its distribution in Europe it is more alpine than most of the genus, and so more local.

A. hydrolapathi (Kirby)—Not nearly so common either here or in Great Britain, and considered rather rare in western Europe. Its special food plant is *Rumex hydrolapathum* (the water dock).

A. marchicum (Herbst)—A small species feeding on several plants, but which, as far as I have observed, seems to be taken generally on the ground in very sandy spots. Its distribution is wide, and it is usually common, but by no means abundant here. It varies a good deal in the shade of colour on its metallic elytra.

A. humile (*Germ*)—General sweeping of the net in herbage often yields this little species in vast abundance; it feeds chiefly on sorrel, but is not very particular. It is quite widely distributed.

A. loti (Kirby)—Should have been mentioned before. It seems a common European species, but in Great Britain it is of southern distribution, and is rare here; its food plant is *Lotus corniculatus*,

P.S.—Since I drew up the list in the foregoing note, I have been able to add two more species to the lists. There are:—

A. varipes (*Germ*) which much resembles the common and destructive *A. apricans* (*fagi*), and has a similar habitat,

viz., red clover. It is, however, a very rare species in Scotland, and indeed only had one—and that a very old—record from this country, having once been taken in Dalmeny Park, Edinburgh. Its European distribution is wide.

A. scutellare (Kirby)—A comparatively large species, entirely black, and found on whins (*Ulex Europæus* and *nanus*). In spite of the prevalence of its food plant it is new to the Scottish list, and so is of interest. In England it is local in the south and midlands, in Europe it is a generally rare species.

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2. *The Campanology of Dumfriesshire and Galloway—The Bells of Dumfries.*

By Mr James Barbour, Architect, Dumfries.

In Edgar's MS. History of Dumfries mention is made that previous to 1708, when those in the Midsteeple were hung, there were only two bells in the town,one being in St. Michael's Church and the other in the Tolbooth. Now there are a large number, but I propose to notice the six which belong to the town—viz., the Carliel bell, in the Observatory Museum, those in St. Michael's and Greyfriars' Churches, and the three bells in the Midsteeple. The dimensions, weight, and note of the several bells are as follows :—

	Diameter.		Height to top of shoulder.	Thickness of soundbow.		Weight.	Note.
	At mouth.	At shoulder.		Where perfect.	Where worn.		
	ins.	ins.	ins.	ins.	ins.		
The Carliel Bell ...	16	8¼	12¾	1⅛	1¼	75 lbs.	G.
St. Michael's Church ...	35½	19	26	2½	2¼	8 cwt.	B Flat.
Greyfriars' Church ...	37½	20	28½	2 6/16	2½	9 cwt.	G Sharp.
Midsteeple (largest) ...	35	18	26½	3 5/16	1 5/8	8 cwt.	E Flat.
Midsteeple (second) ...	28	14½	22	2¼	1¾	5 cwt.	E flat. Oct. higher.
Midsteeple (smallest) ...	25	13	19⅓	1 5/16	1¾	3 cwt.	E natural.

The Carliel bell, which is decorated with belts composed of groups of delicate lines, is of very graceful form and beautiful workmanship and finish, and the surface remains sharp, almost as if it were

newly cast. The inscription of two lines, extending quite round the body of the bell, composed of ornamented raised Gothic letters, each on a small square, is—

+ : WILHELMUS : DE : CARLIEL : DOMINUS : DE TORTHORVALDE : ME : FECIT : FIERI : + IN : HONORE : SANCTI : MICHAELIS ; ANNO : DOMINI : MILLESIMO : CCCC:XXXX: III.(+ : William de Carliel, Lord of Torthorwald, caused me to be made. + In honour of St. Michael, the year of our Lord, 1443.)

Below the inscription appears what I take to be the founder's mark, circular in form, about an inch diameter, slightly raised, showing inscribed border, and in the centre a heater-shaped shield bearing a bell and cheveron lines over it, probably representing the frame on which the bell would hang. From marks of abrasion on the interior and exterior of the sound-bow, it is evident that the bell has been in use not only to be wrung in the ordinary way, but also for sounding the hours by the mechanism of a clock. This is the bell which hung in the Tolbooth, mentioned by Edgar, who describes it as a "little, sharp, clear-sounding bell." As no clock existed at the Tolbooth, it is to be presumed that the original position of the bell would be elsewhere, and, doubtless, the Lord of Torthorwald's gift in honour of St. Michael would be to the Church dedicated to the archangel, which, as we will see, was afterwards gifted with another bell. I hope to be able to show at another time that several churches in the district were similarly furnished with two bells. When the Town Council, in 1830, removed from the Tolbooth, afterwards "The Rainbow Tavern," and now a bookbinder's workshop, to the Council Chamber in the Midsteeple, formerly "the Court-House," the bell, which hung in a cleft of the chimney over the rainbow stair, was moved and placed in the parapet of the Midsteeple building, again beside a chimney, where it remained, and was known as the fire bell until about twenty years ago. The chimney being out of order, a tradesman was employed to put it into repair, who, finding the bell, which had been out of use for a long time, to be in the way removed it. After a space the absence of the familiar object from its accustomed place was observed, and search being made it was found in the tradesman's yard on a heap of scrap, and recovered. So this artistic bell, whose clear, sharp notes have sounded over the town for four hundred years, narrowly escaped the melting pot.

St. Michael's Church bell, while not approaching the one just

described, is yet a clean, sharp casting, the second in order of artistic merit of those under notice; and, thanks to those who had the care of the recasting, it bears an interesting inscription recording its history, which would otherwise have been lost. We learn that the bell was recast in 1818, and again in 1839, and that the time of its original founding reaches back to within eight years of the date on the Carliel bell, viz., the year 1451. The letters are Roman, and the inscription, the first part of which relates to the original founding, and the second to the recasting, is—

HÆCCE CAMPANA QUAM WILLIELMUS A.D. MCCCCLI EXCUDENDUM CURAVERAT IN USUM ECCLESIÆ ST. MICHAELIS DUMFRISIENSIS.

ROBERTO WALLACE D. D. PRESBYTERO SACRA PROCURANTE. DAVIDE ARMSTRONG ARMIGERO PRÆPOSITO. GEORGIO DUNBAR, THOMA MILLIGAN, ET JOSEPHO BECK BALIVIS. JACOBO GIBSON DECANUS SOCIETATIS. LIE DEAN OF GUILD, ET JOANNE M'KIE THEASAURO, BURGI DUMFRIS. FRANCISCO SHORTT ET JACOBO BROOM CLERICIS EJUSDEM.

NOVATA A.D. MDCCCXVIII ET RENOVATA A.D. MDCCCXXXIX.
THOMA MEARS LONDINI.

(This bell, William, A.D., 1451, caused to be cast for the use of the Church of St. Michael's, Dumfries.

Robert Wallace, D.D., minister of the parish; David Armstrong, Esquire, Provost; George Dunbar, Thomas Milligan, and Joseph Beck, Bailies; James Gibson, Dean of Guild; and John M'Kie, treasurer of the burgh of Dumfries; Francis Shortt and James Broom, clerks of the same.

Re-cast A.D. 1818, and cast again A.D. 1839. Thomas Mears, London.)

The re-casting and hanging of the bell in 1818 cost the sum of £126 12s 5d, of which the Town Council paid one-half, the other being paid by the landward heritors. Thomas Mears, London, was the founder, and the details of the account show that whereas the new bell weighed 8 cwt. 1 qr. 6 lbs., the weight of the old bell was only 4 cwt. 2 qrs. 16 lbs.

In 1839 the bell being cracked, a committee was appointed by the Town Council to make inquiry, and on 6th September, "Bailie Milligan reported answers to the application for the expense of re-casting the Old Church bell from Mears, of London, showing that, taking the metal of the old bell weighing 8 cwt. 1 stone 10 lbs., the expense of re-casting may be about twenty-four pounds, and that over and above the expense of taking down,

carriage, and re-fitting." The work was instructed to be done without delay.

Edgar mentions that the bell was supposed to belong to the Abbey of Sweetheart. Similar traditions regarding bells in the district are not uncommon, and in following out this inquiry it is intended as far as possible to test their probability. In the present instance the matter is easily disposed of, as the inscription shows that the bell was cast for the use of St. Michael's Church, Dumfries.

The person at whose instance the original bell was cast is styled "William" in the inscription, a mode of address signifying that he was a dignitary. The dignitary most closely associated with, and bearing direct rule over, the church of Dumfries, and to whom the style of address found on the bell would rightly belong, was the Lord Abbot of Kelso, the church having been granted to the monks of Kelso by William the Lion, and being at this period still in their possession. The name of William VI. has been traced in documents from 1435 on till 1444, and the first mention of Allan, his successor, is in the year 1464. The dates, therefore, with the form of the inscription, point to William VI., Lord Abbot of Kelso, as the donor of the ancient bell weighing 4 cwts. 2 qrs. 6 lbs., and bearing the inscription :—

HÆCCE CAMPANA QUAM WILLELMUS A.D. MCCCCLI EXCUDENDUM CURAVERAT IN USUM ECCLESLÆS ST MICHAELIS DUMFRISIENSIS.

Greyfriars' Church bell is the largest of the bells under notice. It bears the sentiment :—FLOREAT DUMFRIES ; WM. EVANS FECIT ; and the date 1744. The New Church was built in 1727. The bell after being twice re-cast in Dumfries, was again fractured, and on 9th May, 1743, the Town Council appointed a Committee "to consider what is proper to be done with the bell of the New Church steeple, which is lately cracked or broke, and whether it will be proper to dispose of it and to purchase another bell or two for the said steeple." 20th February, 1744, it was agreed "to cause take down the bell and send the same to Bristol, and there to cause cast the same of new into a bell of about a thousand weight." The Midsteeple bells are inscribed as follows :—

The largest—THIS OF 800 LIBS WEIGHT : WITH OTHER TWO BELLS : VIZ-ONE OF 500 LIBS, AND ANOTHER OF 300 LIB : WERE FOUNLED FOR THE TOWN OF DRUMFRIES : EDR 1708, UPON THE TOWN'S CHARGE ; WILLIAM COPLAND OF COLLIESTON, PROVOST.

The second—FOR THE TOWN OF DUMFREIS T ∩ R EDR 1764.

The third—FOR THE TOWN OF DRUMFRIES, 300 LIB EDR 1708.

The figures represent Scots troise weight. The second bell has evidently been re-cast in the year it bears. George Barclay, founder, Edinburgh, contracted to furnish the bells for 17s 6d Scots per pound; they were to be brought, hanged, and tongued by the contractor at his risk, the town paying the carriage, and if the town choose not the bells after ringing, the bargain was to be *nil*; Barclay's account amounted to £1698 14s 6d Scots for stocking, tagging, tonguing, transporting, and hanging the said three bells. In regard to the uses of the bells, the Town Council minute of date 13th December, 1708, bears—"The Council thinks fit for letting the town know the time of day and night the better, that the second bell of the Steeple be rung every day at six o'clock afternoon, and every morning at six o'clock; and that the large bell of the Steeple be rung every night at ten o'clock; and that the said largest bell be rung every Sabbath before the latter bell instead of the Tolbooth bell, and the second or third bell rung therewith at the same time; and that the said largest Steeple bell in case of fire be knolled; and, lastly, that the second Steeple bell be rung on week days when there are to be sermons in the church instead of the Tolbooth bell." On the 10th January following the Council "appointed William Pickersgill to be ringer of all the bells of the Steeple and kirk during their pleasure, and that for payment of forty-two pounds Scots of yearly salary, to be paid quarterly, and the Council ordains the said bell-ringer to ring the second bell of the Steeple on the Sabbath mornings with the first kirk bell; and to ring the bells for fifteen minutes space at the time mentioned in the Council's former act, and appoints the Treasurer to furnish the bell-ringer with half-a-stone of candle yearly, at the 1st of January, to let him see to ring the bells in the night time." The regulations are utilitarian, except in the case of the six o'clock bell on Sunday morning, which does not fit in with any purpose of the kind. The Kirk-Session records of early date show that three bells were rung before service, the first being at six o'clock in the morning, which is therefore an old custom, and considering the hour, it is probably a continuation of the ancient "Ave Maria" bell, at the hearing whereof all betook themselves to prayer. There are other occasions on which, according to custom, the bells are in use to be rung—the birthday of the Sovereign, the sitting of the Circuit Court, the meeting of the Synod, Presbytery, and

Town Council, and on the election of the magistrates for the burgh. It has not for a long time been the custom to ring the bells at funerals, except in the case of public men, but at one time the practice was to ring once or oftener on payment of a small fee, as the following extract shows:—April 25, 1695—"This day the Session appoints that all persons that have . . . burials to pay for shall come to the Precentor of the Church of Dumfries (who, being also clerk to the Session, keeps the register of these) before the bell go for the dead, and enrol their names and pay their money according to the several times they will have the bell to go; and ordains the Clerk to give them a certificate to deliver to the bellman." In connection with funerals, mention is made in the Town Council minutes of the hand-bell—"The officer and ringer of ye bells in the steeple and old Church, and ringer of ye hand-bell for burials." Greater significance attaches to the bells when used to sound alarm or celebrate joyful events just transpired, or give expression to such as are of mournful import. Instances of their use in summoning the lieges to arms for the defence of the town are on record. Rae, describing the events of the Jacobite rising in 1715, says that on the last day of October a detachment of the enemy arrived at Ecclefechan with orders to go and block up Dumfries. "His Majesty's friends at Drumfries having received intelligence hereof that morning early, by an express from Ecclefechan, an alarm was given by beating of drums and ringing of bells (the signal concerted to be given on the enemy's approach), and intimation was made to all, both townsmen and strangers, to appear instantly in arms at the Moat." Further, he says, "An express came from Roucand affirming that the rebels were advanced to Torthorwald, when she came off, and by that time would be within three miles of the town. This being intimated the town was again alarmed as formerly, and every man stood to his post."

During the French war the town was patriotic and loyal, and the bells were in request to give expression thereto. William Grierson's diary furnishes examples:—

25th April, 1794.—This morning was ushered in with ringing of the bells. They were rung at six in the morning, at twelve, and at six in the evening, on account of the taking of Martinico. The prospect of peace was more welcome even than victory, for on the arrival of the news of preliminaries of peace being ratified in 1801, the usual order of the magistrates was not waited for, but the door of the bell-house was broken open, and ringing

proceeded with, which was continued until nearly one o'clock in the morning. And on the signing of the treaty the year following the door was again broken, and the bells pealed forth heartfelt thanks; nor did the joyous sounds cease until daybreak. Next day also was devoted to rejoicing, and the ringing was continued at intervals until night. The treaty proved abortive, and the celebration of victories continued.

9th November, 1805.—News of the glorious victory obtained over the combined fleet of France and Spain on 21st October by Lord Nelson. The bells set ringing, and continued until about four o'clock in the morning. The joy much damped by the death of Lord Nelson.

The same diary contains instances of a different kind:—

3rd January, 1794.—At twelve o'clock the late Provost Robert Maxwell was buried in the Old Churchyard, on which occasion the great bell tolled.

Monday, 25th July, 1796.—This day at twelve o'clock went to the burial of Robert Burns, who died on 21st, aged 38 years. The great bells of the Churches tolled at intervals during the time of the procession.

8th January, 1795.—About eleven o'clock at night was alarmed by the ringing of the fire bell, on account of a house that was on fire in the Kirkgate.

1st January, 1801.—This day has been appointed for the Union with Ireland to take place, in celebration of which the Volunteers, Nottingham Militia, and 4th Regiment of Dragoons turned out at twelve o'clock and fired a *feu de joie*. The bells were likewise rung on the occasion.

Prominent mention is made of the bells in Mayne's *Siller Gun*—

And while the muster roll was calling,
And joy bells jowing,
Het pints, weel spic'd to keep the saul in,
Around were flowing.

The merry bells, in jocund chime,
Rang through the air,
And minstrels play'd, in strains sublime,
To charm the Fair!

Nor fife nor drum
Was heard, save when the fire-bell rang
For some foul lum!

The bell-ringers were carefully chosen men, and several of them are mentioned as having received commendation and reward for faithful services, but the most remarkable was Thomas Wilson, known as "Blind Tom." He was blind from infancy. Being appointed to the office of bellman at the early age of 12, he performed the duties during the long period of 63 years, and died in 1825 at the age of 75. It might almost be said that he died at his post, for he fell down insensible of his last illness in the bell-house, and probably the peal then rung by his own hand was to him the last experience of sweet sound. He rang the bells of Dumfries, it is said, more than one hundred thousand times, and with the regularity of the clock itself, only once making a mistake

by ringing at 11 instead of 10—a circumstance he could not account for, or even understand the possibility of. The usual 15 minutes ringing at intervals on the King's birthday fell short of satisfying his feelings of loyalty, and it was his custom to mount the highest leads of the Steeple with a blunderbuss which he possessed, and there, in sight of the town, fire several rounds supplementary to the bells in honour of His Majesty's natal day. Widely known and much respected, he was accorded a public funeral, the bells being tolled at intervals as a mark of respect, and the occasion excited more interest than any similar event since the death of Burns.

What is before written of Wilson is mostly borrowed from his tombstone. A word may be added of evidence furnished by the bells confirmatory of his zealous performance of duty. The side of the 10 o'clock bell is deeply indented, the sound-bow being worn quite half through. It is Blind Tom's mark. The bell should be turned half round in order to preserve it from fracture.

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3. *Ornithological Notes* by Mr Hugh M'Kay, Dumfries.

So far as I can learn the past winter has not been very productive of rare occurrences amongst birds in this locality, if I except the few following instances:—The first to come under my observation was a fine example of the green sandpiper (*Tolanus ochropus*). Two of this species were shot on Conheath Merse last December. I am informed that these are the first specimens recorded in this locality after an interval of four years. A specimen of the bartailed godwit (*Limosa rufa*) was given to me by Mr Charles Turner. It was caught in the nets on Caerlaverock shore in the beginning of February. Although the species is common enough on our shores in the autumn and spring months, it seldom makes its appearance so early. A fine two-year-old specimen of the black-throated diver (*Colymous arcteus*) was brought to me from Lochmaben on the 4th of March. This species is the rarest of our British divers, and I have been informed that considerable numbers frequented Lochmaben and vicinity during the past winter. A specimen of the common crow was shot at

Kelton last November, the beak of which was peculiarly malformed, the upper mandible being so much curved over the lower as to make it appear almost impossible for the bird to feed. I was, however, assured by Mr West, who shot the specimen, that it was in fairly good condition, although it is difficult to perceive how it managed to pick up the food necessary for its existence. During the months of December and January last five specimens of the common heron (*Ardea cinera*) were sent to me from various parts of the country for preservation. On examining the contents of each bird's stomach I found four out of the five contained the semi-digested portions of the common rat. These were not the water vole, but the common long-tailed rat. In one of the herons I found an unfortunate rat which had been swallowed immediately prior to the bird being shot. It measured ten and a quarter inches from the tip of the nose to the tip of the tail. There is nothing new in the discovery of rats forming part of the heron's food, yet I presume that these birds will add another little delicacy to their bill of fare in the shape of those small though too numerous mammals the voles. The angling community generally look upon the heron as their enemy; and while I am bound to admit its partiality for fish, it is well to remember that the deficiency created by its depredations in trout streams is amply counteracted by its undoubted usefulness in other respects as one of the most active of nature's policemen. Even in a trout stream the heron does some good by devouring the eels, which play such havoc with salmon and trout ova during the spawning season. I am indebted to Mr Henry Martin, of Dardarroch, for the following note, and although it is three years since the specimens were obtained, they were not recorded, and are therefore worthy of mention here. He informed me that on the 1st of March, 1890, three specimens of the American white-winged crossbill were observed in Dardarroch woods, a male and female of which he shot, and are now in his collection. I doubted his statement at first, and remarked that it might be the two barred crossbill, which in appearance is much similar to the American species, but he assured me that they were undoubtedly the American species, and could be seen at any time. He also informed me that the common crossbill was seen throughout the whole of the year. A fine specimen of a blackbird with a white head was sent to me the other day from Holywood. Several blackbirds with white

markings frequented the vicinity of Gatehouse last summer. I myself saw three specimens all differently marked, and also a pure white starling without the slightest trace of a single dark feather. A pair of squirrels were brought to me during the winter, one of them having a fine cream-coloured tail. The lady who brought them quaintly remarked, "Here's qua wee ferrets tae be stuffed." I looked at the "qua wee ferrets," and asked her when she would like them. "Oh, weel," she said, "Im in nae great hurry; the night 'll dae fine."

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4. *Caryophylls.*

By Mr George F. Scott-Elliot, M.A., F.L.S.

If one studies the structure of any particular order, and follows the different modifications found in its various species, it is important to know where to begin. Some would commence with the most highly modified forms, such, for instance, as *Lychnis* and *Silene* in this particular order, and would then proceed downwards to the most degraded types, such as *Sagina*. Others might follow exactly the reverse order, beginning with the degraded types and ending with the highest, or what we call the highest. Both these methods are, however, apt to lead one off the track in explaining the origin of any peculiar specific adaptation. *Lychnis flosculi* is a very highly developed bee-flower, while *Sagina* is a degraded type of flower apparently adapted to ants and the lowest kinds of diptera; neither is, in any sense of the term, an ancestor of the other. Such an ancestor should rather be sought for in the middle of the order, and probably some form like *Stellaria* or *Cerastium* can be regarded with the most probability as nearest in structure to the original Caryophyll ancestor, from which *Lychnis* has risen and *Sagina* fallen. Beginning, therefore, in the middle one may take *Stellaria uliginosa* as a fairly good instance of a generalised Caryophyll, and I will first point out the main features of its adaptation to insect visitors, and then try and show the different departures in other forms.

One finds in *Stellaria uliginosa* ten stamens, of which the five outer, which are opposite the sepals, become ripe, and shed their

pollen before the others (opposite the petals). Honey is secreted by a little cup-like ring at the base of these outer sepaline stamens, but a rudimentary ring exists also at the base of the others. The styles vary in number, from three to five, and project outwards between these outer erect sepaline stamens. Hence insects visiting the flower alight on the petals and crawl round under the outer stamens so that their sides are touched by the anthers or stigmata. The visitors are in this form (as in almost all) flies of medium size, and probably belonging to a large variety of genera.

S. Holostea is very similar, but the stamens are more curved outwards, so that self-fertilisation by contact of the stigmata and anthers in the same flower is very rare; the chickweed *S. media* is on a lower scale, as here the stamens are often reduced in number from ten to sometimes only three, and self-fertilisation by contact happens very frequently. *S. graminea* has advanced, however, a little, as in this form the styles are lengthened, and the filaments of the stamens are shortened so that contact of the anther and stigma is impossible; and the effect of this is shown by the fact that a higher class of flies, such as Syritta pipiens, with more rapid flight and a higher type of mouth, are found on it. *S. nemorum* is very near *S. graminea.*

Cerastium vulgatum and *alpinum* are a little higher in the scale than *S. uliginosa*, as in these forms self-fertilisation is prevented almost entirely by a different artifice; here the stigmata are not fully ripe till the stamens have dehisced. *C. arvense* is distinctly more advanced, for each sepaline stamen is broadened at the base or insertion, and forms with its sepal a sort of miniature canal; honey is held in this canal, and to a certain extent protected both from evaporation and small short-lipped and thievish flies; probably it is visited by a higher order of flies or possibly small bees, but I was too late in the season last year to prove this.

In the genus *Arenaria*, one finds in *A. trinervis* the petals much reduced in size, and this enables the flower to secrete a larger amount of honey; hence, mainly intelligent kinds of Diptera frequent it in spite of its inconspicuous character. *A. serpyllifolia*, which is a dwarf plant adapted to poor soil, is not quite so rich in honey, and contact of anthers and stigma occasionally happens. *A. peploides* is utterly different; here the

general fleshiness of the plant has led to a much more open kind of flower, and the nectaries are large and orange-red in colour lying between the stamens, and not encircling them at the base as in almost all the other Caryophylleae. Here, however, the stamens dehisce early, and curve so far outwards that self-fertilisation is improbable.

In *Spergularia rubra* one finds a distinct advance, as the petals are often pink, and honey is secreted by a ring of tissue, due to the confluent basis of the stamens; the honey is only protected by the flowers not opening till about 2 P.M., when that of all flowers which have been open since the morning must be nearly exhausted. This is visited by bees.

Silene inflata is a great step in advance, as it has large flowers which form a regular cup with a narrow entrance so that the honey is well protected from thieves and evaporation. Self-fertilisation is prevented by the very late ripening of the styles, and the biting propensities of some of the larger bees is guarded against by the calyx of united sepals which is much swollen, so that even the comparatively long trunk of a Bombus would have difficulty in reaching the honey from the outside as they frequently try to do.

For *Lychnis* one finds the calyx hairy and viscid instead of being inflated for a similar reason, and these are the highest type of flower found in the order. *L. vespertina* is much like Silene in other respects; but *L. diurna* and *flosculi*, with their red flowers, are entirely adapted to bees, and have also been described in a former paper.

If we wish to go downwards one has to travel back to *Stellaria media* to find anything like *Sagina procumbens*, which is usually sans petals, sans honey, sans everything in the way of special adaptation to insects. Probably it depends almost wholly on self-fertilisation, and its habit of closing in dull cloudy weather renders this easy instead of protecting the honey as in *Spergularia*. It is also in a strangely variable condition, sometimes with petals, sometimes without, and with a very changeable number of stamens. It is only visited so far as I know by ants.

A list of the insect visitors, probably very incomplete, may be found in the 2d Part of the Dumfries Flora, and though this is a very fragmentary account even of our British Caryophylls, it may perhaps induce some of our members to take up this interesting study.

5. *The Burial Place of Alexander the Great.*

By E. J. Chinnock, M.A., LL.D.

I have recently seen in English and American magazines the statement that a sarcophagus has been discovered at Sidon supposed to have contained the body of Alexander the Great. As arguments have been adduced to support the theory that Alexander may have been buried at Sidon, I have collected the following passages to show that he was buried at Alexandria. I can find no mention of any other place where he is said to have been buried.

1. *Arrian* (apud Photium, lib. 92) says that Arridæns conveyed Alexander's body from Babylon through Damascus to Ptolemy in Egypt, in spite of the efforts of Perdiccas to get possession of it.

2. *Diodorus* (XVIII., 2 and 26-28) says that the generals elected Arridæns, the son of Philip, and the half brother of Alexander, king of the Macedonians, and assigned to him the duty of conveying Alexander's body to Ammon for burial. Arridæns spent two years in preparing a magnificent car and other ornaments for the tomb, and then conveyed the body towards Egypt. He was met in Syria by Ptolemy, who escorted it with military honours to Alexandria, where he deposited it in a sanctuary specially prepared for it, deciding not to convey it for the present to Ammon.

3. *Curtius Rufus* (De Gestis Alexandri X., 31) says that the body was embalmed by Egyptians and Chaldaeans, and placed by Ptolemy at Memphis, and a few years after transported by him to Alexandria, where, says Curtins, "every honour is paid to his memory and name." Curtins is supposed by Zumpt to have lived in the reign of Augustus. Others assign him to the time of Claudius or Vespasian, and he cannot have lived later than the reign of Trajan.

4. *Aelian* (Varia Historia XII., 64) also says that Ptolemy conveyed the body of Alexander to the city of Alexandria, using stratagem to delude the regent Perdiccas, who wished to get possession of it.

5. *Justin* (XIII., 4) says that Arridæns was ordered by the Generals to conduct Alexander's body to the temple of Ammon.

6. *Suetonius* (Life of Augustus 18) says that Augustus

Cæsar saw Alexander's body at Alexandria, and placed it upon a golden crown, and scattered flowers upon it.

7. *Dio Cassius* (51, 16) says that Augustus saw Alexander's body at Alexandria and touched it, and was said to have accidentally broken off a part of the nose.

8. *Strabo* (XVII., 1) says that the Sema was an enclosure near the Museum at Alexandria, in which were the tombs of Alexander the Great and of the royal Ptolemies. He adds that Ptolemy buried Alexander's body in this Mausoleum, where "it now still lies; not, indeed, in the same coffin, for the present one is of transparent alabaster (hyalos). Ptolemy deposited it in a golden coffin, which was carried off by Cocces and Ptolemy Parcisactos." This took place about 57 B.C., this Ptolemy being originally named Saleucus, and called in derision Cybisactes, dealer in salt fish.

Here we have precise statements by three out of the five historians of Alexander that he was buried at Alexandria. Justin agrees that the original order was that he should be buried at Ammon in the desert. Plutarch says nothing about the burial. From Strabo, Dio Cassius, and Suetonius we learn that the embalmed body was in existence at Alexandria 300 years after the death, and from Curtius that in the fourth century after the burial every honour was paid to him at Alexandria.

REPORT ON THE HERBARIUM.

By Mr G. F. Scott-Elliot, F.L.S., F.R.Bot.Soc., Edin.

The Herbarium is advancing both in completeness and in accuracy. The present number of species represented is over 900, out of the 1858 recorded in the London Catalogue. This is an extremely valuable collection for a County Society like ours, and as we have not yet really begun to exchange plants with other societies or individuals, it is encouraging to see how much can be effected within a comparatively short time.

The thanks of the Society are very specially due to Miss Hannay for the condition of the plants and the mounting, which could not be better done. I hope, before very long, to go through and name the entire Herbarium with a good standard one in London or Croydon, so that every name may be considered authoritative, and so leave no doubt in the minds of students. There are, in fact, not more than three or four places in Great Britain where a thorough knowledge of British plants could be more easily picked up than Dumfries, and it is to be hoped that this material will induce students to come forward.

Amongst those who have sent us specimens this year are Mr Arnott, Mr Wilson, Mr J. T. Johnstone, Mrs Thompson, Miss Finlay, &c. I have to announce that Miss Alice Wedderburn has presented to the Society the whole collection made by her brother, the late Mr F. E. R. Wedderburn, in the neighbourhood of Glenlair, Dalbeattie. The specimens are about 120 in number, and are all in the most perfect preservation, and beautifully mounted. This collection includes many rare plants, such as Apium inundatum, Geum intermedium, Hieracium aurantiacum, and is altogether a most valuable addition to our Herbarium.

The thanks of the Society are due to Miss Wedderburn, both for the careful way in which the collection has been mounted and preserved, and for her kindness in presenting it to us. The late

Mr F. E. R. Wedderburn was a most careful and enthusiastic botanist, and Miss Wedderburn has taken care that the result of his labours should be preserved for the advantage of future students.

The collection of grasses and sedges which Mr Tom Brown has most kindly presented to the Society contains numerous rare forms, and one, Carex elongata L., which is of the very greatest interest. It has hitherto been only known in Scotland from one locality in Kirkcudbright; and if, as I understand, this plant was found near Auchenhessnane, it is a most interesting discovery.

Miss Hannay has received a most valuable collection of 32 plants from Mr Bennett, of Croydon. Most of these are rare and critical species, *e.g.*, 17 species of Potamogeton, and these are of the greatest value to our Herbarium, especially as they are authoritatively named by Mr Bennett himself.

FIELD MEETINGS.

Saturday, 4th of June.

A visit was paid to the Grierson Museum, Thornhill, Penpont Church, the Valley of the Scaur, and Glenwhargan. Many beautiful and some rare plants were collected by Mr James Shaw, especially note-worthy being some heather in bloom, a thing which had never before been seen so early in this district.

Saturday, 1st of July.

ECCLEFECHAN AND BURNSWARK.

Leaving Dumfries about half-past ten, a party of seventeen spent the day in driving to Ecclefechan by way of Carruthers-town; thence to Burnswark, with its series of Roman encampments, and home by Lockerbie and Lochmaben. The route was one touching several points of outstanding interest.

The first halt to be made was opposite to Repentance Tower, in order to permit of the party climbing the little hill which is crowned by this puzzling and curiously named structure. In appearance it is like a diminutive square tower of the familiar Border keep pattern. Its walls are pierced by a number of loop-holes and by a square window on the south (now built up) and a door on the north. On the door lintel there are carved the word "Repentance," in old English letters, and rude figures of a dove and a serpent, scriptural types of innocence and wisdom. The original stronghold, which forms the centre part of the present building, was erected in the fifteenth century by Lord Herries, then owner of the domain; and it is one of this family, understood to be the same who built Hoddam Castle, that is associated with the story of Repentance. The most impressive because most tragic legend is that a chief of the house of Herries, returning from an English foray, was crossing the Solway with a

band of prisoners, and being overtaken by a storm lightened the boats by drowning his captives. Repentance Tower is said to have been the outward and visible sign of his remorse for this act of barbarity, as it would be a constant mentor. The tradition further represents that the erection of the tower was an act of penance prescribed by the Bishop of Glasgow. A more prosaic account of the genesis of the tower associates it also with ecclesiastical dictation. According to this story Lord Herries had laid sacrilegious hands upon church lands, and the erection of Repentance was a sign of penitence required of him by the clergy. Colour is given to this theory by the generally accepted report that Hoddam Castle was built of the stones of a chapel. There were anciently two churches in the immediate vicinity. One was the chapel of Trailtrow, on the site of which Repentance Tower stands, in the midst of its old burial-ground; the other was the church of the original parish of Hoddam, on the left bank of the Annan, a short way below the castle. If Trailtrow Chapel had been demolished in order to help with the building of the fortress, there would be something like poetical justice in compelling the spoliator to undertake the task of rearing another building on the same elevated spot, and giving it a name which should be at once a confession and a constant reminder of his guilt. And from what we know of the spirit of the time, interference with the patrimony of the Church would be quite as likely to excite the retributive indignation of her priests as a sanguinary act of war.

It is a curious spot to find a little God's acre on the summit of a hill, and where the graves must almost literally be hewn out of the rock. What is apparently the oldest of the tombstones still retaining its lettering is a flat one thus quaintly inscribed: "Here lies ane honest man, Andrew Davison, once in Knockhill, husband to Jonnet Wallet, who with her had seven children, who living with peace and accord with all dyed the 2 of June, 170—, and of his age 63." Rae, which sometimes takes the form of Ree, is a name of frequent occurrence. Irving is another repeatedly met with, and three holly leaves are carved on the memorial of one of this family. The Murrays of Murraythwaite have here their family burial place, enclosed by a high wall. A Latin inscription tells that it was first erected by George Murray and Christina Forrester, his spouse, some time in last century.

The three stars of Murray and three hunting horns figure as the heraldic devices of the pair. The little parish of Trailtrow was formally annexed to Cummertrees in 1609, its chapel having, we fancy, disappeared long before; but the burial ground, in which hemlock is found growing, is still in occasional use.

Driving on to Hoddam Bridge, the company here made a short halt to allow the botanists to scan the banks of the stream, while others walked along to the old Hoddam churchyard. A singular feature on the gravestones here is the indiscriminate and apparently irrelevant use of heraldic devices. There is one obvious play on a name several times repeated. This is the carving of three bells on stones which mark the resting places of persons bearing that patronymic; and the name here seems to have been about as common as it was in a neighbouring parish, where "the Bells of Middlebie" was a phrase in the common currency of speech. Here also the three holly leaves recur associated with the name of Irving. The oldest date observed was 1677, which was that of the interment of the spouse of Archibald Corrie. The parochial schoolmaster who in this quiet vale would be teaching rustic youth their letters during the profligate days of the Restoration, and while peaceful Presbyterians were hunted on the hills, is commemorated by a simple upright slab in good preservation, which sets forth that—

Here lyes Iohn Short, schoolmr. in Hoddam, who departed this life Febr. 7, 1707, aged 60 years, and Helen Wilson, his spouse, who deptd. this life Decr. 12, 1717, aged 63 years.

Death did come in by loathsome sin,
but Christ for all did die,
And unto those yt. wt. him close
he gives the victory.

The parish church of Hoddam stands about a mile from Ecclefechan at a place known as the Cross of Hoddam, a site which was chosen about the time of the union of the three parishes of Hoddam, Luce, and Ecclefechan; but the present building, although of antiquated appearance, dates only from 1817. In this churchyard is the burial place of the Sharpes of Hoddam. Here is interred Charles Kirkpatrick Sharpe, the accomplished, but dilettante man of letters and antiquary and friend of Scott; and beside him rests his elder brother, General Matthew Sharpe, who sat as M.P. for Dumfies Burghs from the passing of the first Reform Bill until 1841. This laird of

Hoddam had for some time Carlyle's father as a tenant; and the latter asserted his independence in rugged style in an interview which the son gleefully chronicles.

On reaching Ecclefechan a visit was paid to the churchyard in order to visit Carlyle's tomb. Along with his brother, Dr Carlyle, he is commemorated by the central and most recent stone of the three in the family plot. The names of the father (who died in 1832), his two wives, and two daughters appear on the stone to the right. The concluding part of the inscription embodies a filial tribute which bears the clear imprint of the author: "And here also now rests the above Margaret Aitken, his second wife; born at Whitestanes, Kirkmahoe, in Septr., 1771, died at Scotsbrig on Christmas day, 1853. She brought him nine children, whereof four sons and three daughters survive, gratefully reverent of such a father and such a mother." The grave of Dr Archibald Arnott of Kirkconnell Hall, Napoleon's physician, also claimed attention. The inscription sets forth the scenes of his active service with the British army as a surgeon of the 20th Foot, and adds: "At St. Helena he was the medical attendant of Napoleon, whose esteem he won and whose last moments he soothed."

From the churchyard the party proceeded to the "Arched House," in which Carlyle first saw the light. The old stone stair, worn with the footprints of many years, has now been covered with wood. At the top of it are two apartments. The one to the left is a very narrow room built over the arch. It was at one time shewn as the actual birthplace; but that the important event occurred in the larger room, to the right, we have certified by the hand of Carlyle himself, who, we may presume, obtained the most authentic information on a subject regarding which his personal recollections would be more than hazy. A small photograph of the two houses is hung on the wall of this larger room, and on the window of it Carlyle has placed an asterisk, and below the photograph he has written—"* Room where I was born; to the middle of that Arch was my Father's House, village of Ecclefechan; 4 decr., 1795. T. Carlyle. (Chelsea, 5 july, 1871.)" All the furniture in the room and its modest embellishments (including this little picture) came from the Cheyne Row house, and most of them from the study; so that the whole surroundings are strongly reminiscent of

Carlyle. Here are one of his arm chairs, a little couch, his reading lamp—with ponderous white glass globe—a very small hanging bookcase with copies of Chapman & Hall's shilling edition of his work, a letter rack, some pieces of china set into a wall recess, a curious coffee-pot for use over a spirit lamp, and his tobacco-cutter—a substantial implement, with long blade, and worked like the old-fashioned single-knife turnip-cutter—a small "wag-at-the-wa'" clock, presumably a family heirloom, and the kitchen tea-caddy. Here also are two of the philosopher's hats—the veritable straw, of ample rim, with which we were accustomed to see him perambulate the outskirts of Dumfries on a warm summer day, and an equally wide-spreading soft felt. On the wall are groups of photographs shewing Carlyle and his wife at different periods; a tiny portrait of the pet dog which was the innocent cause of Mrs Carlyle's death, through the shock which she received by seeing it in immediate danger from the wheels of a carriage in Hyde Park; a photographic group taken on the steps of the residence of the late Provost Swan at Kirkcaldy, the parties being Carlyle, his brother, the doctor; his niece, Mrs Mary Carlyle; and their host. There is a wonderfully regular stream of visitors to the house. The number of signatures entered in the book since the beginning of the year is 145. This visitors' book is a gift of Joseph Cook, of Boston, who visited Ecclefechan in March, 1881, the month following Carlyle's death. The room itself is just as it was in Carlyle's childhood, with the exception that the door has been renewed, and that, of course, painting and papering has been done.

Burnswark hill was the next and last object of interest which had a place in the itinerary, and it is one of itself well worth a special journey. At its base is the largest of all the camps which testify to the three centuries or more of occupation of lowland Scotland by the Roman armies; and it is understood to be the best preserved of any in the whole country except the one on Moor of Ardoch, in Perthshire, near where Agricola inflicted the sanguinary defeat on Galgacus and the Caledonian army. Burnswark itself is one of the most conspicuous and best-known features in the landscape, its well-marked individuality commanding attention over a tract of country which extends far into Cumberland, over into Liddesdale, and to the head of the Annan valley. This prominence it owes less to its height, which is only

some 740 feet, than to its isolated position and unique shape. The peculiar configuration of Burnswark strikes the eye of every passing traveller. It is an escarpment, or steep terraced hill, of igneous origin, and is in contrast to the smoothly outlined hills of the silurian region to the north and west. These escarpments, with their bands of volcanic rock, run eastward through Eskdale to the head of Slitrig Water, and rise in Ewesdale to such prominences as Pike Fell and Arkleton Fell. Specimens of volcanic tuft were found on Saturday in a quarry to the south of Burnswark. The ridge is intersected by a deep saddle-like depression. The main camp lies along the base of the southern slope, near to the east end, in the most sheltered situation. The rectangular earthen ramparts and the deep fosse outside still clearly shew its extent, which is three hundred yards in the one direction and two hundred to the other. A slight eminence at the north-east corner, within the camp, but partially isolated by a second fosse, indicates no doubt the prætorium, where the general's tent would be pitched. Breaks in the earth-works on the side next the hill, and in proximity to the low portion already referred to, shew where the gates would stand, and mounds have been thrown up outside for their protection. The dimensions usually assigned for the fosse in Roman camps are nine feet deep and twelve broad, and here these conditions seem very nearly fulfilled. The spring, which was an indispensable requisite of the situation, is near the centre of the camp. Its waters still flow cool and abundant. The second camp occupies a corresponding but more westerly position on the northern side of the hill. While the lesser of the two, it is still of very extensive proportions. It afforded security from attack on the north, effectually covering the central depression in the hill, along which an enemy might otherwise have approached the main camp. This was really the only vulnerable point in the position. At the north-west and north-east angles nature has provided the most perfect defence in rocky walls so steep that no force would venture to scale them. There was, indeed, a possibility of approach on the south side from the western end, where there is a gentler slope; and to meet this contingency a subsidiary encampment, more nearly approaching the semi-circular shape, had been constructed beside the piece of plantation that neighbours Burnswark Cottage. This outpost commanded also the Roman road carried from this point up

Annandale, of which the grass-grown track is to this day very distinctly visible along several fields, and there are some indications that another outpost had existed a short way along the road in the opposite direction, where it afforded a line of communication with the English border. The indubitable existence of this piece of ancient roadway, proceeding in a north-westerly direction from this important military station, affords material support to the theory, recently assailed, of the existence of other vestiges of it in the vicinity of Moffat. On the western summit of Burnswark there is a wonderfully perfect circular earth-work, the remains apparently of a still older Celtic strong-hold, which the Romans would, no doubt, utilise as a post of observation. A camp so elaborately constructed was not, of course, a mere casual resting place; but must have formed the permanent quarters of a large body of troops, from which they would be able to keep the surrounding country in subjection, to prosecute campaigns against the Novantes in western Galloway, and to carry on their road-making and other civilising works. Here they would dwell in huts constructed probably of timber cut from the forest that overspread the land in all directions, and covered over with leather or the skins of animals taken in the chase. The numbers resident in the camp would, of course, fluctuate with the exigencies of the service. Gibbon states that three legions were regularly assigned for the occupation of Britain; and while the number of Romans in a legion only slightly exceeded six thousand, he calculates that the auxiliaries attached to it would bring its strength up to about 12,500. On this basis the army of occupation for both England and Scotland would number some 37,000.

New Member.—Mr John F. Cormack, Lockerbie.

The following botanical specimens were found by Mr Scott-Elliot:—Conium maculatum—Gasstown, Repentance Tower, and Ecclefechan; Scabiasa Columbaria—Hoddam Brig; Œltrusa Cynapium — Ecclefechan roadside; Rosa arvensis—Roadside, near Birnswark; Viola lutea, var. amœna—Summit of Birnswark.

Saturday, 5th of August.

SOLWAY FISHERY AND NEWABBEY.

The party drove by way of Kirkconnell and along the Kinharvie road to the now famous fish hatchery belonging to Mr J. J. Armistead. The hatchery is situated in a picturesque and sheltered spot on the Kinharvie estate surrounded on all sides by pine trees, and with a north-easterly aspect on to a stretch of undulating moorland. On arriving at the hatcheries, whither they had been kindly invited, they were met by Mr Armistead, whose warm-hearted genial manner at once produced a feeling of confidence among the party that their visit was acceptable. Mr Armistead took them to the hatching shed, where the rows of tanks in which the ova will be planted on glass grills in October and the ensuing months were in course of being overhauled prior to the busy season which then begins. The tanks were being re-varnished with paraffin varnish, which is a much better preservative than ordinary paint, and the water is allowed to run through the tanks for at least a month before the spawn is placed in the boxes. Mr Armistead explained to the visitors the process of fish hatching, and described the different kinds of fish which he cultivates, including the different varieties of trout, char, grayling, salmon, and others. The enterprise is one that necessitates for successful issues much delicate skill and scientific knowledge. When fairly stocked he calculates he has accommodation with his present appliances and tanks for two million fish, and it must be apparent even to the uninitiated that the feeding and attention of such a large family requires a great expenditure of time and trouble and expense. Even in what is termed the slack season, which lasts till about October, six men are daily engaged in carrying food and tending the fishes. At the present time, when the marketable stock does not exceed fifty thousand, about two hundredweight of prepared food is distributed among the inhabitants of the tanks daily. The smaller fry are fed four times daily, and the larger stock fish about twice. The food consists of beef and mussels, and other shell fish and crustaceans. One of the assistants showed the visitors the interesting sight of the trout feeding. So soon as a handful of the food was thrown on to the surface of what was a moment before a placid, sluggish looking moss hole, it instantly became a

boiling lake in miniature with great big fat trout careering madly along the surface, and keenly competing with one another in their eagerness to satisfy their natural voracity. To witness such a sight was enough to break the heart of an angler, especially when he was vetoed from trying his skill on such beauties. There are about sixty tanks in all, containing trout of different varieties, including the Californian species, some of which spawned last season, and American trout, the latter of which Mr Armistead was the first to introduce into this country. There are also char and grayling and other fish, from all of which Mr Armistead procures his own ova when the season for spawning comes round. The young fish, which are sent out when about a year old, are transported in glass bottles, packed in wooden boxes, and the season for sending them out begins now and continues during the winter. When foreign orders are received eggs are always sent carefully packed in moss. Apart from the danger of tumbling into the deep tanks which intersect the ground in every direction, there is a perfect network of wires over the little farm, all of which are connected with spring and alarm guns, and the moment a wire is touched, a nest of hornets would be buzzing around the marauder's ears that he would fain have left asleep.

Proceeding next to Newabbey, the visitors surveyed the architectural features of the fine old ruin and puzzled over the fragmentary inscription which has been interpreted to mean that the Lady Devorgilla founded the abbey in the year 1284. Its Latin is not free from obscurity, the word which is assumed to stand for "fundatrix" appearing to be literally "fuoatrix." The visitors had been very kindly invited by Miss Copland of Collieston to take tea at Abbey House; and here they had an opportunity of inspecting a family heirloom with a romantic story. This is a silver quaich or loving-cup which was "hanselled" at the marriage of John Copland of Collieston and Agnes Hairstens of Craigs on the 30th of January, 1654. It is a little basin standing two inches and a quarter high, and measuring six inches and seven-eighths in diameter at the brim. It is enriched with a dainty floral pattern. There are two little flat handles, on the upper side of which are carved the initials of the pair whose espousals it commemorates—"I. C." (the i being used for j in the old lettering) and "A. H.;" and on the under side of one of the handles the date of the marriage is engraved. This unique

family relic has just been restored to the possession of Miss Copland as the result of an action in the Sheriff Court, it having formed part of the contents of a plate chest which went amissing in the hands of the bankers to whom it was committed for safe custody and got mixed with the Carnsalloch possessions.

Newabbey, it may be observed in passing, has a close link of association with Dumfries more recent than that supplied by Devorgilla, the pious founder of its abbey, and the builder also of the Old Bridge of Dumfries. This is the mutual interest which the two places possess in the memory of Bailie John Paterson. A native of Newabbey and a magistrate of Dumfries, where he died in 1722, he was the most generous benefactor of our Academy, for the benefit of which he bequeathed a sum of £835, secured on Preston and other lands in Kirkbean. His interest in his native place was shown by erecting the bridge that carries the Dumfries road over the burn just north of the village, and still more substantially by a handsome bequest for the poor of Newabbey.

Saturday, 2nd of September.

Dundrennan Abbey.

On reaching the Old Abbey village the party dismounted and walked down to the ruins, which formed the principal object of the day's visitation. They were here received by the Rev. George Maconachie, who gave a learned exposition of the architecture of the Abbey. The church, Mr Maconachie says, the most conspicuous part of the Abbey, was built in the form of a Latin cross. Viewed from the north, it presented an immense ridge of roof, 60 feet high, extending from east to west about 210 feet, and crossed near the east end by another roof, the height and span of which can be determined from the existing gable of the north transept. At the point of intersection there rose a dumpy square tower, ten feet above the roof. Looking at the side walls of the longest part, that runs east and west, these would be seen to be about twenty feet high, and above them there rose a "lean-to" roof, from the upper edge of which the walls rose for ten feet, and contained the windows of the clerestory. The same arrangement obtained, of course, on the other side of

the church. Passing in by the great west door, the nave was entered, to the right and left of which were rows of clustered pillars thirty feet high. The aisles or wings were outside of these, and were covered by the "lean-to" roofs. The high-pitched roof of the nave began from the top of the clerestory, forty-five feet from the ground. The nave was 130 feet long and, including the aisles, 60 feet wide. Passing eastward from the nave, the spectator came beneath the central tower, with the chancel in front and the transepts to right and left, with wings extended eastward. The style of architecture was late Norman or Transition. The pointed arches, usually supposed to be Gothic or early English, are found in pure Norman work, as in Fountain Abbey and Kirkstale Abbey in Yorkshire. The presence of both round and pointed arches in the ruins have led some to conclude that the architecture belonged to the transitional period, which would imply that the church, although founded in 1142, was not built till after 1175; but the church, judging from the style of workmanship, must have existed prior to the latter date. He thought that the pointed arch with its clustered mouldings was introduced as a symbol of the upward struggle of the Christian life, furrowed with trials and sorrows, just as the form of the church was the symbol of Christ. On the south side of the church there was the cloister court, an open space 104 ft. square, the burying ground of the monks. The west side of the cloister court was bounded by a series of cellars, still to be seen, probably used as cellars or storehouses, and over these was probably the dormitory of the monks. On the east side of the cloister court was the chapter house, separated from the south transept by a mortuary chamber, an open space called the *slype*. Over the chapter house, the state room of the Abbey, stood the scriptorium, and to the south of the chapter house there was placed the dining-room. In the south-west angle of the cloister court there is a doorway with a pointed arch on the side next the cloisters, and a rounded arch on the other. This door probably led into the locutorium or monks' parlour, and from the mouldings it seems to be of a later date than the chapter house. The other buildings are said to have covered a space 300 feet square. Traces of the kitchen and of another house, probably the abbot's lodging, are to be seen; but where the infirmary, the granaries, brew-house, bakehouse, &c., &c., were must be matter of conjecture. Captain

Grose had stated that he saw with the minister of Rerrick a plan of the original buildings, but that had unfortunately been lost. The most interesting of the monumental stones within the ruins of the Abbey are the abbots, the cellarers, the nuns, and the effigy of Alan, Lord of Galloway. So far Mr Maconachie, who on Saturday, while describing the abbot and cellarer effigies, dwelt upon the symbolical nature of the accessories.

The burying-place of the Maitlands of Dundrennan was next visited, after which the journey was continued to Port Mary. Passing through Port Mary House gardens the party wandered down to the little bay bearing that name, and examined the granite boulder whence the luckless Queen Mary is generally believed to have stepped into the boat that carried her to England after her misfortune on the field of Langside.

Dr Chinnock proposed that Mr William Thomson be elected an honorary member of the Society. He, in a humble, unassuming way, has done much good work in inculcating a spirit for antiquarian and natural history research in the district. It was he who discovered the famous cup and ring markings at the Banks, and while his practical knowledge is often overridden by reason of his modesty, he possesses a better acquaintance with the homes and haunts of flowers and plants than any other man in the parish in which he lives; and his antiquarian knowledge is always qualified by a vein of original thought and theory which may perhaps contain much more than a passing consideration can discover. It was a first intention to visit the old British fort of Caerbantorigum, mentioned by Ptolemy, and situated on the farm of Drummore, but time would not permit, and a direct route was taken to Kirkcudbright. On arrival there, the Museum was visited, and its principal items examined under Mr John M'Kie's guidance.

New Members.—Messrs John Carlyle Aitken, Kirkcudbright; Frank J. C. Carruthers, Lockerbie; and Robert Grierson, Castle-Douglas.

Honorary Members.

E. G. Baker, F.L.S., British Museum, London.
J. G. Baker, F.R.S., Royal Herbarium, Kew.
Robert Barbour (late Secretary), Cape Town.
Arthur Bennett, F.L.S., Croydon.
George F. Black. Ph.D., Museum of Antiquities, Edinburgh.
J. Harvie Brown, F.L.S., Larbert.
William Carruthers, F.R.S., F.L.S., British Museum, London.
Dr Anstruther Davidson, Los Angeles, California.
Dr James Grant (Bey), LL.D., Cairo.
Peter Gray, Edinburgh.
Sergeant Alexander M'Millan, Kilmarnock.
Sir Herbert E. Maxwell, Bart., M.P.
Alexander D. Murray (former Secretary), Newcastle.
Dr David Sharp, F.R.S., Cambridge University.
J. Starforth, Architect, Edinburgh.
Dr Robert Taylor, Liverpool.
Joseph Thomson, F.R.G.S., Thornhill.
William Thomson, Kirkcudbright.
Joseph Wilson (former Secretary), Liverpool.

Life Members.

Miss Dobie, Penfillan House, Penpont.
Alexander Young Herries, Spottes.
J. J. Hope-Johnstone, Raehills.
Wellwood H. Maxwell, Munches.
William J. Maxwell, M.P., Terraughtie.
William D. Robinson Douglas, F.L.S., Orchardton.
Sir Mark J. Stewart, Bart., M.P., Southwick.

Ordinary Members.

John Adair, High Street.
Sir Andrew Noel Agnew, Bart., M.A., Lochnaw.
John Carlyle Aitken, Kirkcudbright.
Miss Aitken, Rotchell Park.
Miss Margaret Aitken, Rotchell Park.
Rev. William Andson, Newall Terrace.
Joseph J. Armistead, Solway Fishery, Newabbey.
Samuel Arnott, Carsethorn.
James Barbour, Architect, St. Christopher's.
Mrs James Barbour, St. Christopher's.
James H. Barbour, Civil Engineer, St. Christopher's.
Robert Barbour, Belmont.
Robert Barbour, Solicitor, Rosemount Terrace.
Miss Batty, St. Mary's Place.
James Brown, Burgh Assessor, Sanquhar.
Dr Samuel Brown, Victoria Road.
Thomas M. Brown, Closeburn Castle.
Sir James Crichton-Browne, F.R.S., Crindau.
Thomas Rae Bruce, Dalshangan, Dalry.
Alexander Bryson, Irish Street.
Rev. John Cairns, M.A., Ivy Lodge.
Rev. James A. Campbell, Troqueer.
James Carmont, Irish Street.
Frank J. C. Carruthers, Architect, Lockerbie.
Rev. Alexander Chapman, M.A , Castledykes.
Edward James Chinnock, LL.D., Fernbank.
Samuel Chrystie, Buccleuch Street.
Dr Frederick H. Clarke, Castle Street.
Frederick R. Coles, 48 London Street, Edinburgh.
Miss Copland, Abbey House, Newabbey.
John F. Cormack, Lockerbie.
John Corrie, Moniaive.

John Cowan, Birkhill.
John Cumming, Albany Lodge.
Dr Hugh Cunningham, Castle Street.
James Davidson, Summerville.
Hermann F. W. Deane, Dundanion, Moffat.
William Dickie, Laurieknowe.
William A. Dinwiddie, Buccleuch Street.
John W. Dods, St. Mary's Place.
Dr John Douglas, Whithorn.
Bernard Drummond, Moffat.
Patrick Dudgeon, F.S.A., Cargen.
Joseph Duff, Maxwelltown.
J. Gillon Fergusson, Isle.
John R. Ferguson, Artist, Castle Street.
Miss Findlay, 3 Buccleuch Street.
A. W. Findlay, Solicitor, Gordon Street.
James Fingland, Thornhill.
Rev. George L. Fogo, M.A., Torthorwald.
Rev. James Fraser, M.A., Colvend.
Thomas Fraser, High Street, Dalbeattie.
William Galloway, Whithorn.
Mrs Gilchrist, Linwood.
Mrs Gillespie, Netherlea.
John Grierson, Town-Clerk, Dumfries.
Robert Grierson, Builder, Castle-Douglas.
John Gunning, Victoria Road.
Mrs Gunning, Victoria Road.
John Halley, Airlie, Maxwelltown.
Miss Hamilton, Victoria Road.
Miss Hannay, Calderbank.
Miss Jane Hannay, Calderbank.
John Henderson, Solicitor, Claremont.
James Herries, Loreburn Park.
George Johnstone, Castlemilk.
John Thorburn Johnstone, Moffat.
John Kerr, Blountfield, Ruthwell.
Thomas Laing, F.E.I.S., Noblehill.
James Lennox, F.S.A., Edenbank.
Miss Lennox, Edenbank.
Miss Agnes B. Lennox, Edenbank.
Dr Richard B. Lorraine, Castle Street.
John C. R. Macdonald, M.A., W.S., Jeanville.
Dr Alexander D. MacDonald, Castle Street.
James M'Andrew, New-Galloway.
Robert D. M'Glashan, Saughtree.
Mrs James H. M'Gowan, Ellangowan.
Thomas M'Gowan, Solicitor, Rotchell.
Matthew S. M'Kerrow, Boreland of Southwick.
Thomas C. M'Kettrick, Viewfield.
John M'Kie, Anchorlea, Kirkcudbright.
Thomas M'Kie, F.S.A., Advocate, The Moat.
Rev. John D. M'Kinnon, Newall Terrace.
Rev. Robert Mackintosh, B.D., St. Albans, Maxwelltown.
Samuel Macmillan, Bank of Scotland, Moffat.
Mrs M'Tier, Ladyfield.
Dr Alfred Mathias, Nunholm House.
James Maxwell, Screel, Auchencairn.
Wellwood Maxwell, Kirkennan.
William J. Maxwell, Terregles Banks.
Frank Miller, Annan.
Miss Milligan, 7 Irish Street.
John A. Moodie, Solicitor, Irish Street.
Thomas A. Moryson, Montague Street.
Miss Mounsey, Castle Lodge, Ludlow.
Dr Patrick M. Murray, Castle Street.

Robert Murray, George Street.
Mrs Murray, George Street.
John Neilson, M.A., Catherine Street.
John Nicholson, Stapleton Grange.
Christopher Osselton, Nunholm.
Charles S. Phyn, P.-F., Lovers' Walk.
Rev. Patrick M. Playfair, M.A., Glencairn.
John Primrose, Solicitor, Arundel House.
John Proudfoot, Ivy Bank, Moffat.
Rev. D. Ogilvy Ramsay, D.D., Closeburn.
Miss Ramsay, Closeburn.
David W. Rannie, M.A., Conheath.
Frank Reid, St. Catherine's.
Robert T. Reid, M.A., Q.C., M.P., Mouswald.
Richard Rimmer, M.A., F.L.S., Dalawoodie.
George H. Robb, M.A., Nithmount.
Miss Robb, Castle Street.
Miss M. Robb, Castle Street.
Dr J. M. Robertson, Penpont.
John K. Rogerson, Gowanlea, Holywood.
Dr James Maxwell Ross, M.A., Victoria Road.
Dr James Rutherford, Crichton House.
John Rutherford, Jardineton.
Henry Sawyer, Clearwood, Greenbrae.
Alexander Scott, Solicitor, Annan.
Rev. James H. Scott, M.A., Sanquhar.
Robert A. Scott, Kirkbank.
George F. Scott-Elliot, M.A., F.L.S., Newton.
James Shaw, Tynron.
Thomas Shortridge (ex-Provost), Beechwood Bank.
Rev. Richard Simpson, B.D., Dunscore.
Mrs Sloan, Elmbank.
James Smith, Commercial Bank.
James G. Hamilton Starke, M.A., Troqueer Holm.
John Stevens, M.A., Wallace Hall.
Peter Stobie, Queen's Place.
John Symons, Solicitor, Irish Street.
John Symons, Royal Bank.
Philip Sulley, F.R.Hist.S., Parkhurst.
Miss Ethel Taylor, Kirkandrew Rectory, Longtown.
Miss Annie Tennant, Aberdour House.
Alexander Thompson, Rosemount Terrace.
Mrs Thompson, Rosemount Terrace.
Miss Mary Thompson, Rosemount Terrace.
Dr Alexander Thomson, Castle Street.
George Thomson, Solicitor, George Street.
James S. Thomson, 75 High Street.
Rev. John H. Thomson, Hightae.
Alexander Turner, Chemist, Buccleuch Street.
James Turner, Linden House.
J. R. Wallace, Auchenbrack, Tynron.
Miss Wallace, Lochmaben
Miss Amy Wallace, Lochmaben.
William Walls, George Street.
Thomas Watson, Castlebank.
James Watt, Milnwood.
Rev. Robert W. Weir, M.A., Castle Street.
James W. Whitelaw, Solicitor, Summerhill.
John R. Wilkinson, High Street, Annan.
James R. Wilson, Solicitor, Sanquhar.
Mrs Maxwell Witham, Kirkconnell.
Dr John M. Wood, Irish Street.
William M. Wright, Charnwood.