THE TRANSACTIONS

AND

JOURNAL OF PROCEEDINGS

OF THE

Dumfriesshire and Galloway

Natural History and Antiquarian Society.

Founded November, 1862

SESSION 1895-96.

PRINTED AT THE STANDARD OFFICE, DUMFRIES.
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Published as a Supplement to this volume:

BIRRENS AND ITS ANTIQUITIES

BY

JAMES MACDONALD, LL.D.,

AND

JAMES BARBOUR, F.S.A.(Scot.).

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Erratum.—On page 37, line 34, highest reading of Barometer on 9th January, 1896, is given as 31·106 in. It ought to have been 31·016 in.

PROCEEDINGS AND TRANSACTIONS

OF THE

DUMFRIESSHIRE AND GALLOWAY

NATURAL HISTORY & ANTIQUARIAN SOCIETY.

SESSION, 1895-96.

25th October, 1895.

ANNUAL MEETING.

Mr JAMES G. H. STARKE, M.A., in the chair.

New Members.—Mr William Mair Graham, Mossknowe; Colonel Edward Mackenzie, Auchenskeoch; Dr James Maclachlan, Lockerbie. Mr William Galloway, Whithorn; and Dr James Macdonald, Edinburgh, were also elected honorary members.

Donations and Exhibits.—The following publications presented by the curators of the Smithsonian Institution:—Archæological Investigations in the James and Potomac Rivers; Siouan Tribes of the East; Chinook Texts; An Ancient Quarry in Indian Territory; List of Publications of the Bureau of Ethnology; U.S. Geological Survey, 1892-93; Report of the Bureau of Ethnology, 2 vols., 1889-91; Survey of the Rocky Mountains, vol. ix.; North American Fauna, No. 8. The Proceedings of the Academy of Sciences, Philadelphia, 1895; Proceedings of the Society of Antiquaries of Scotland, 1894; Report of Marlborough College Natural History Society, 1894; Journal of the Elisha Mitchell Scientific

Society, 1894; Transactions of the Natural History Society of Glasgow; Annals of the New York Academy of Sciences, Feby., 1895; Bulletin of the Geological Institution of the University of Upsala; Transactions of the Stirling Natural History and Archæological Society, 1894-95; Proceedings of the Natural Science Association of Staten Island; Birds and Mammals of the Philippine Isles (Minnesota Academy of Natural Sciences); a volume on Insecta, from the Zoological Record, 1894, by Dr D. Sharp of Cambridge. Mr Moodie presented, on behalf of Mr Thomas Fraser, Dalbeattie, "The Sederunt Book of the Societies of Coall Adventurers in and about Dumfries, 1736." The Rev. William Andson, exhibited and presented a print of the old house at Friars' Carse, and also a copy of the first issue of the *Edinburgh Courant*.

SECRETARY'S REPORT.

The Secretary (Dr E. J. CHINNOCK) then read his annual report:—There are now 185 members of the Society, of whom 17 are honorary members. Of these 29 have been admitted during the session just closed. Mr Frederick R. Coles, of Edinburgh, was elected an honorary member last October. He has enriched our Proceedings by many valuable contributions; and since his departure from the district has kept up his interest in its antiquities. We may, therefore, expect help from him in the future. We have lost two of our most distinguished members during the year—Mr Patrick Dudgeon of Cargen and Mr Joseph Thomson, the famous traveller. The latter distinguished man had not taken personal interest in the Society since his very early years, when he was introduced by the former esteemed secretary, Mr Robert Service. It was always felt, however, an honour to have his name on our roll. Mr Dudgeon, the famous mineralogist, was in constant communication with us till the last. If he had lived he would have sent us in a few weeks another of his interesting little papers.

Eight evening meetings and three field meetings have been held. At the former 20 interesting papers were read, some of which were of permanent value. A very successful "At Home" was held in January, at which the President, Sir James Crichton Browne, delivered an illustrated address on the "Emotions as exhibited by the Face." Another meeting was held in April to welcome Mr Scott-Elliot home from Uganda. A lecture was

given by Mr Elliot on his travels, and laudatory speech delivered by Sir James C. Browne.

A Roman camp has been laid open at Birrens by the Scottish Society of Antiquaries, on the suggestion of Dr James Macdonald of Edinburgh. At the request of the Edinburgh society we elected Mr James Barbour as our representative on the excavation committee. His choice has been amply rewarded, for he has been of inestimable value to the committee in their explorations. We hope to have a paper descriptive of the results of the excavations from Mr Barbour in the course of the session.

As the subscription for membership is so small, it would be an advantage to the Society if the number of members were increased. After paying for the publication of the Transactions, very little money is left for the defrayment of the incidental expenses of the Society. It is therefore incumbent on members to introduce friends who will either take a personal interest in the work of the Society, or by their subscriptions contribute to its success and usefulness.

Treasurer's Report.

The Treasurer (Mr J. A. Moodie) read the annual report from the 1st October, 1894, to the 30th September, 1895 :—

CHARGE.

Balance in Savings Bank at close of last account				£0	15 6
Less—Balance due to Treasurer at do.				0	3 3½
				£0	12 2½
Subscriptions from 123 members at 5s each ...	£31	5	0		
Do. 9 do. 2s 6d ...	1	2	6		
				32	7 6
Entrance fees from 17 new members				2	2 6
Subscriptions paid in advance				1	0 0
Arrears paid, two subscriptions				0	7 6
Life subscriptions from 5 members at £2 2s each				10	10 0
Copies of Transactions sold				0	16 6
Interest on bank account				0	4 10
Amount collected to cover the expense of Mr Scott-Elliot's meeting...				5	9 6
				£53	10 6½

DISCHARGE.

Salary of keeper of rooms			£1 10 0
Stationery, printing, &c.			0 11 0
Periodicals and books			2 19 2
Coals and gas			0 7 8
Fire insurance premiums			0 4 6
Secretary's outlays and posts			1 14 11
Treasurer's do.			0 19 1
Expenses of calling meetings, as follows :—			
Post cards	£3 15 7½		
Addressing same	1 2 0		
Printing same	0 16 6		
			5 14 1½
Expenses of publishing Transactions for last year, viz. :—			
Account to Wood & Son, lithographers, Edinburgh..	£1 1 9		
Postage of Transactions to country members	0 12 8½		
Dumfries Standard for printing Transactions	22 13 6		
Do. for printing copies of Mr M'Andrew's paper	0 10 6		
			24 18 5½
Expenses of conversazione in Free St. George's Hall... ...			7 7 4
Expenses of Mr Scott-Elliot's meeting in Greyfriars' Hall ...			2 12 6
Miscellaneous			1 1 6
			£50 0 3
Balance in Savings Bank	£1 0 0		
Cash in Treasurer's hands	2 10 3½		
			3 10 3½
			£53 10 6½

DUMFRIES, 31st December, 1895.—I have examined the foregoing account and the cash book of the Society, compared them with the vouchers, and find the balances stated to be correct.

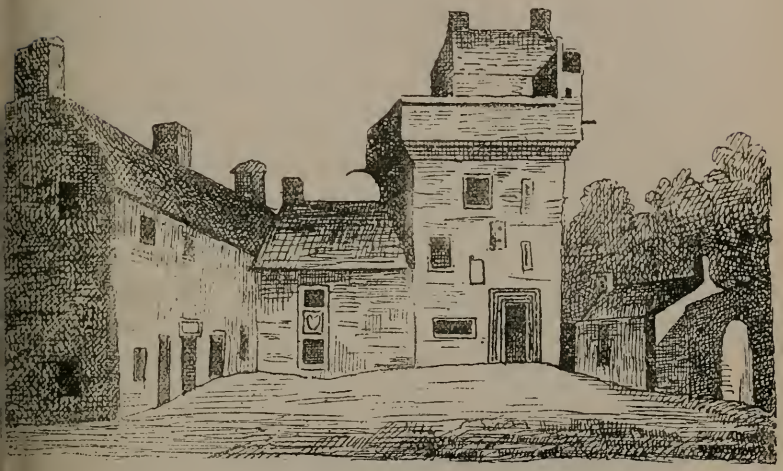
JOHN NEILSON.

ELECTION OF OFFICE-BEARERS.

The following were elected office-bearers and members of the Council for the ensuing session :—President, Sir James Crichton Browne, F.R.S. ; Vice-Presidents, Messrs Thomas M'Kie, William J. Maxwell, James G. H. Starke, and Philip Sulley ; Secretary, Edward J. Chinnock, LL.D ; Treasurer, Mr John A. Moodie ; Librarian, Mr James Lennox ; Curator of the Museum, Mr Peter Gray ; Curators of the Herbarium, Mr George F. Scott-Elliot and Miss Hannay. Members of the Council :—Rev. William Andson,

Messrs James Barbour, James Davidson, James C. R. Macdonald, Robert Murray, John Neilson, George H. Robb, James M. Ross, James S. Thomson, and James Watt.

The Secretary then read a very instructive paper by Dr R. H. Taylor of Liverpool, entitled "Travelling in the Air."



Old Friars' Carse.

The following is the paper read by Mr Andson, describing "Old Friars' Carse":—As far as I can gather, Friars' Carse was originally the property of Melrose Abbey, and seems to have been the site of a monk's cell—whence, in all probability, the name. At a later period it belonged to a branch of the Kirkpatricks of Closeburn, from whom it passed to the Maxwells of Tinwald. Then it came into the hands of the Riddells of Glenriddle, who were the possessors in the time of Grose, the antiquarian, and Robert Burns. The pen-and-ink sketch of the old house, which I now produce, is dated 1773, and is identical with that figured in Grose's "Antiquities of Scotland." It is known that Grose visited Scotland on his antiquarian tour in 1789, and that in the course of it he paid a visit to Friars' Carse, where he was the guest of Captain Riddell, and it must have been at that time that he met with the poet, who had entered on the farm of Ellisland in the previous year.

Grose states in his notice of Friars' Carse that the old house, of which he gives a print, was pulled down in 1773 "to make way for the present one"—that is, the one which existed at the time of his visit. He states, also, that the old house was pulled down because it had become ruinous, and that the wall of the refectory or dining-room was eight feet thick, and the chimney twelve feet wide. These facts and the whole style of the building indicate great antiquity; and I think there can be no doubt the sketch now produced is a correct representation of the house as it existed prior to 1773. It is true that it was not seen by Capt. Gorse, but we cannot suppose for a moment that he drew upon his imagination for the representation which he gives. He was in circumstances to get reliable information as to its character from the proprietor at the time of his visit, and in all probability a drawing of it had been taken before it was demolished, which he reproduced in his work. I therefore think there can be no doubt that the pen-and-ink sketch on the table is a correct representation of the ancient house of Friars' Carse as it existed prior to the year 1773.

Mr Andson further mentioned that the estate passed from the Riddells to Dr Crichton, founder of the Crichton Institution, who purchased it in 1809. We may add that the quaint old battlemented building figured above has had two successors—the house that was built by Capt. Riddell, and the modern mansion that was built by the late Mr Thomas Nelson, who bought the property from Dr Crichton's heir. In the new house is incorporated the dining hall of the intermediate building that was the scene of the "the whistle" contest. The estate, as our readers have of late been frequently reminded, was acquired by the trustees and directors of the Crichton Institution within the last five months. The sketch was found among the papers of a gentleman who was at one time land-steward on the estate, and there is some reason to believe that it is the work of Alexander Reid of Kirkinner, who painted a portrait of Burns.

8th November, 1895.

The Rev. William Andson in the chair.

New Members.—Mrs Scott-Elliot and Miss M'Cracken.

Communications.

I.—*The Work of the Future British Botanist.* By Mr G. F. Scott-Elliot, B.Sc., F.L.S.

The work of the British botanist of to-day labours under certain distinct disadvantages. There are so many books that he can very easily learn to name the commoner species, but he will very soon find that all those plants which are within an easy walk are discovered, and unless he turns to cryptogams, or attempts very long and distant excursions, there is nothing new for him to collect. Now there is a natural, perfectly legitimate, and most praiseworthy desire in every scientific spirit, to discover something new to add to the store of human knowledge in his own particular department, and leave it the richer for his existence. In the British botany of to-day this can only be done in such genera as Hieracium, Rosa, Rubus, and Salix, none of which can ever be thoroughly mastered by one human being. In such genera it is even possible in this country to discover (or, perhaps, more properly, invent) new species, as, in fact, has been done in Dumfriesshire. Such genera afford an infinite field for work. Bentham made some seven species of Hieracium, for instance, while the ninth edition of the London Catalogue contains 104, and this number may be increased to 400 in future editions. But as specialists in these four critical genera never agree, and only one can be supreme, there are only four future British botanists who can find an outlet for their energies in this direction, and these four must be magnificent pedestrians, with the whole of their time at their own disposal.

Another field for the present British botanist is the recording of plants and a county Flora. It is possible to make new records anywhere (I have made a few myself), but to make a county Flora involves an enormous expenditure of time and great walking power, even with a London Catalogue, which expands yearly, and produces new subjects to record. It is true there is still room for local Floras—I do not think the present number exceeds 15 out of the 100 and more counties for which they are required. Mr

Bagnall, the author of the Warwickshire County Flora, which is the best that I have seen, is a clerk in a Birmingham factory, and his work is a wonderful example of what can be done in very scanty leisure time. Such a feat is not, however, possible for most people. The object of this paper is to show that for the future British botanist there is within easy reach of any person's home an enormous field of work in which investigation is urgently required, and which can be cultivated by any industrious and sharp-sighted observer.

The present British botanist treats all the details of flower, leaf, and fruits as if they were invented by Nature simply in order that he may conveniently label his collections. It is a sufficiently astonishing fact that scarcely any realise, that every small and insignificant character has a definite object and purpose. Yet this is obvious to everyone who grasps the principle of Darwin's "Struggle for Existence"; and the idea goes back to far before Darwin's time: for Geoffrey St. Hilaire, in 1795, had grasped it more or less clearly, and it is very philosophically explained by Herbert Spencer in 1852.

In our own time Sir John Lubbock, Grant Allen, Henslow, Korner, Wiesner, and others have studied this question practically. A few illustrations will make their point of view clearer. Flowers are red not because human beings admire that colour, or find it a useful guide in the study of botany, but because this shade attracts a certain kind of insect. A poppy has thick, hard, and hairy sepals, which enclose the young flower, and fall off when they are no longer required, *not* because caducous sepals are useful to us in distinguishing the order Papaveraceæ, but because they are of advantage to the bud.

A laurel has glossy, hard leaves because the rain dries rapidly off foliage of this kind, and hence fungus spores and bacteria do not find a footing. If you look at this sparmannia you will see that the leaves have a curious shape. They are brought back into lobes, so that the growing point is protected from excessive light and heat. So with the curious, unsymmetrical begonia leaf; the odd lobe protects the young bud, though this is not easy to see in hothouse specimens.

These are isolated examples of a new and most important branch of botany which may be called "The Suitability of Plants to their Climate," or one may say Habitat, Environment, or Milieu.

for all these terms mean the same thing. Mixed up with this study of suitability is another problem of still greater importance —"The Evolution of Plant Organs." Darwin's work on the "Origin of Species" was incomplete in one respect. He showed that if a more suitable variety were granted, this best variety would be chosen by Nature just as a gardener would select it, namely, by weeding out the others which were less suitable. Darwin did *not* show how the variety arose.

In some cases the climate, by its own direct influence, produces that variety which is the most fitted to itself. It is true that this has only been proved in a few cases, but the theory may be entirely general. A simple instance will make this clear. The first time that a man rows in a boat he discovers that he blisters the hand at the root of his fingers; this painful result is followed by the formation of hard skin pads at the place, and with these he can row without pain. It is only required to suppose that these pads or hardnesses should be inherited to see how, in this instance, the direct action of the surroundings produces the variety best suited to resist them. To put it more simply, there are two distinct branches of botany, the one "*Why* plants have certain organs and arrangements," and the other, "*How* they produced such organs." It is obvious, if we wish to study these questions, it is quite essential that we should have a thorough knowledge of the climate, habitat, or environment of every plant, and that is exactly what we do not possess. The late Dr Gilchrist had a very clear idea of this problem. I quote his exact words: "It is very difficult, from its extreme complexity, involving a knowledge of the plant's relation to whatever can modify its growth, to the soil on which it grows, to the air which it breathes, to the sun which gives it light, to the rain, dew, or snow which afford it moisture." I do not know when these words were spoken, but it shows that Dr Gilchrist anticipated the very newest botanical ideas.

Perhaps the best method is to take the various organs of the plant in detail, and to try and show *why* they have their present shape, and perhaps, in some cases, *how* these have been evolved. Flowers are the more important organs, and it is on this account that in the Flora of Dumfriesshire I have included insect visitors where possible, these being essential parts of a flower's environment. I found it impossible in one season to investigate more than six species thoroughly, on account of the unfortunate

fact, that it is not possible to be in two places at the same time. I had no hope, therefore, of doing our 900 species in a thorough manner, so I have simply studied about 270, with much help from Miss Hannay, Mr Armstrong, and others, as well as I could manage. The result is that I am firmly convinced that a flower's shape and every detail of colour, scent, mode of ripening, &c., is entirely dependent on the insects which carry its pollen. Thus, in the order Labiatæ of the fourteen species studied, I found bumble-bees in every single case, except Mentha arvensis, where I should not have expected them.

	Species of Bombus.	Hive Bee.	Other Insects.
Mentha aquatica	1	...	2
Mentha arvensis	...	...	3
Thymus serpyllum	1	1	2
Calamintha clinopodium	1	...	...
Nepeta Glechoma	1	...	...
Prunella vulgaris	1	..	...
Scutellaria galericulata	2	...	...
Stachys betonica	3	...	..
Stachys silvatica	3	..	1
Stachys palustris	3	..	1
Galeopsis Tetrahit	3	...	2
Lamium purpureum	1	...	...
Teucrium Scorodonia	3	1	1
Ajuga reptans	1	...	2

The colour and two-lipped condition are entirely suited to these bumble-bees, and this suitability is found in quite minute details.

But it is not safe to draw tables or to generalise in our present knowledge of the question. For instance, on the common bramble I found, with Miss Hannay's assistance, the following insects—the cabbage white butterfly, hive bee, no less than four bumble-bees (B. muscorum, terrestris, Derhamellus and pratorum), and only two flies or diptera, and these latter were not common sorts, but of a complicated and intelligent type (Eristalis pertinax and sericomyia borealis). I should have expected the sort of simple and stupid type of fly which one finds, *e.g.*, on the strawberry, to which the bramble flower is not so very different. The bramble enjoys this select set of visitors, probably because the flowers appear so late in the season that these bees are not tempted to visit other forms, but no one would have expected such a result. In spite of the vast amount of observation yet required, it is safe

to draw the following conclusion. The flower is seldom the shape of an insect's head and proboscis *at rest*, but it almost exactly includes the space occupied by its various visitors in their motions when visiting and sucking honey; in other words, if we imagine a bee and the other insect visitors going through the same motions in a yielding substance like jelly, the space excavated by all the visitors would be an exact model of the flower. Granted the growth and the principle of economy, with such modifications as are due to the strains and mechanical support, the flower moulds itself, or may do so, to the average visitor.

This gives a hint of the manner in which the shape has been produced (*cf.*, a foxglove and a bumble-bee, for instance, which fit like an old glove to its usual finger). But this is nearly all we know of how flowers may have been formed. Colour, it is true, seems a result of strong illumination. We do know that Alpine flowers exposed to strong sun are much richer and deeper in colour than the same species when cultivated at lower levels. But far more observation is required to shew even this properly. It is particularly important to know whether such flowers as the rose, bramble, anemone, &c., are more often pink when growing in sunny localities; and this is one question for the future British botanist. Another point for his attention is the size and number of flowers. I can, without hesitation, say that in exposed situations the number of flowers is usually greater than in sheltered places, and their size is, I think, usually diminished, but this point ought to be investigated with proper measurements. Another effect of strong exposure is to shorten the pedicels, which are more or less directly suppressed by the transpiration in exposed places. The result is to aggregate the flowers into a head or close corymb. In the colour, size, number, and the aggregation of flowers into heads or corymbs, therefore, the effect of exposure may be directly traced, and in the future these points will, no doubt, be proved.

If we turn to the vegetative system, the first point to notice is the shape of leaves. Of course leaves exist in order that the plant may obtain as much light and carbonic acid as is possible without hurting the tissue. It follows that there are two points to observe. The first is the manner in which the shapes of leaves and their positions on the branch are so arranged that they take up as much as possible of the light which falls on them. In the summer I could have shewn you any number of examples, but at

this season I can only shew you Mimulus and this Fuchsia. The effect is to produce a mosaic which nearly fills the space exposed. One must, however, remember that it is the plane at right angles to the sun's rays that must be studied. Thus, to see the mosaic of leaf-work on a vertical wall, you must look downwards, standing about as far from the wall as your own height.

The second point, the protection of leaves from injury by too strong sunlight, is not so easily seen in this country, but it can be traced, for instance, in the position of the black poplar leaves, which are hung with their flat surface vertical so that they are edgewise to the sun. The same arrangment may be seen in the blue gums and other Australian trees, which, in consequence, give but little shade. I think the position of the young leaf surface in all our British plants is worth investigation.

I have already alluded to the necessity of rain-water being rapidly and quickly conducted off the leaves as explaining the smooth, glossy surface of Rhododendron and laurel foliage. If you compare these and other evergreens with an ordinary deciduous leaf, such as that of the chestnut, for example, the difference is most remarkable. The latter has roughnesses, hollows, grooves, and scattered hairs, all of which might afford a lodgment for fungus, spores, and bacteria. This is the beginning of the subject, however, for if you watch rain-water falling on any plant, you will find that in some cases it is conducted carefully from leaf to leaf till it reaches the outside circumference of the shadow. In such a case (as in the foxglove or chestnut) the roots spread out horizontally, so as to be directly under the drip. In other forms the rain-water is conducted down the leaf-stalk to the stem, and trickles down until it reaches the root, which in these species is usually long, or rather deep and vertical (Chickweed, Woundwort). Sometimes the stem is grooved, or the leaves have stipules or auricles, which assist in directing this stream in a definite direction. A good example is the so-called ligule of grasses, which prevents rain with germs and spores from entering the sheath in which the tender, growing part of the stem is enclosed. Nothing is known of the arrangements of most of our British wild flowers. Sir John Lubbock has shown that stipules are used to protect the bud either of the leaf or the growing point of the stem. The common rock-rose protects its bud by them, but those species of rock-rose which are without these organs protect the bud by hairs

or by an expanded leaf-stalk. Stipules are probably useful in other ways, *e.g.*, in conducting rain down the stem.

Hairs are found very commonly in Nature, and are used for all sorts of purposes. The most important is probably to guard against excessive loss of water by transpiration. In the Sahara Desert the prevailing tint of the landscape is grey, not green as in our own country, because almost all the shrubs are covered with grey and silvery hairs. This also occurs in Europe in exposed situations. The Edelweiss growing on wind-swept rock ledges is densely white and silvery, so is the Alpine Ladies' Mantle. These plants cover themselves with cotton-wool to keep the moisture in just as we use clothes to keep the rain out. An instance of this is found in our Alpine Chickweed, found at Black's Hope, &c. This chiefly differs from the common species by being more woolly and having larger flowers. We can in this case guess how this species may have arisen, for a variety (alpestre) of the common C. triviale, which I found to be common on Whitcoomb and Auchencat in 1892, is both more hairy and larger flowered than is usual, and so approaches the Alpine form. There is even a good deal of evidence on hand to show that hairs disappear when such exposed plants are cultivated in moist and sheltered places. I have found this myself in a desert plant which I grew in a greenhouse, and which lost its hairs in that situation. Something of the same kind is found in Polygonum Amphibium, of which land forms are viscous and hairy, while water forms are quite smooth. In this species the hairs are probably of use in guarding against insects. It is said that hairs occasionally absorb moisture, but this cannot be considered proved. I have already alluded to their use as protection against insects; a good example is the characteristic downward-pointing hairs of the Forget-me-not. The stinging hairs of the nettle prevent human beings from injuring its brittle stems, and the hairs of the white deadnettle, as well as the plant generally, are so similar that the latter enjoys the same protection. In other cases they are utilized for climbing or the distribution of seeds, as, *e.g.*, in the goose grass and other Galiums. The Sundew uses modified hairs to catch insects. In the Chickweed they are used to conduct water down the stem, and so on.

The modifications of the stem are scarcely so well known; plants are annual and perennial as a matter of convenience. The former are most common where there is a distinct check to vege-

tation. In England, for instance, we have many annuals, and in Tripoli and Egypt there are numerous tiny forms whose life is confined to the few days during which the soil is kept moist by a shower of rain. They spring, blossom, and die in perhaps three days. The fact that many of our annuals are perennial at the Cape proves that there is no real distinction between the two forms.

Every tree and shrub, again, has a method of branching peculiar to itself, but varying much according to the particular situation. This depends on which of the possible buds are allowed to develop, and how long each is able to grow before it is checked. Thus, in a very sunny or windy place a twig grows only a very short distance. Its tissue soon becomes so thick that it cannot elongate, though it may become wider; it therefore stops, and another bud sends out a little twig which stops, and yet another, and so on. The result of this is a dense twiggy branching which one finds typically in plants growing by the sea or in exposed places.

Another important effect of the development of the stem is the rosette type of plant, such as, *e.g.*, the daisy. Here the internodes are suppressed as a result apparently of exposure, for many of these rosette forms will develop internodes if grown in moist, half-shaded places. However produced, the rosette shape is characteristic of plants that grow on bare earth, and whose leaves can lie flat down upon the soil. The plant gains by this structure, for its cushion or rosette of leaves retains dew, and keeps the earth below moist, while not having an expansive stem to make, the plant can send a long root into the rock crannies, or use up its surplus material in flowering branches or in vivid colour. In this case you see the climate or exposure, by suppressing the internodes, forms a rosette of leaves flat on the ground, which is a form exactly suited to the circumstances.

This is a good example of how plants have a certain structure, and also of how these have been produced. To give a good idea of the present theory of the origin of variations, as I hold it myself, it is necessary to go a step or two further. We will suppose that a species of an ordinary kind of Hieracium, common in glens and corries, has had a seed blown by wind to an exposed rock ledge at some distance off. The exposed situation will have the effect of suppressing the internodes so that

the leaves are flat on the rock, forming a rosette; the leaves will also become more hairy and possibly a darker red; the flowers will become more closely set together, very likely more numerous, and perhaps smaller. If this plant and its neighbours in the glen freely cross with one another, then a new species will not occur, because any variation (except such as is immediately due to the situation) will be stamped out by crossing with the original species. If, however, this plant and others sown beside it cannot cross with the ancestral form, these modifications may become hereditary, and in course of time a new species will arise. The plant is really in a sort of island, and we know that in islands there are often an enormous number of peculiar or endemic species, and it is this absence of crossing with the parent species, combined with changed conditions, which has produced them. There are three ways, at least, in which this may act in our own country. (1) The spot may be an island by position, so that crossing can scarcely occur. Hence the importance of studying localities. The Hieracium nitidum of Backhouse discovered by J. T. Johnstone in 1892 at Andrewswhinnie, could only, by an inconceivably minute chance, be crossed with its parent. (2) It may be an island through change in the flowering period. If the plant on the exposed spot blooms and finishes flowering before its relatives in the glen begin to flower it cannot be crossed with the parent. Hence the importance of knowing how long a plant remains in flower, and when it begins and ceases blooming. (3) It may be an island through its insect visitors being different. It is obvious that if the same insect does not occur in both places, crossing is impossible, and hence the importance of insect visitors.

I trust that in the preceding I have shown that the future British botanist will have plenty to do, and I give it as my deliberate impression both that this study of the *why* and *how* is the most important of all botanical enquiries, and also that any person who chooses can make the most valuable discoveries by careful observation in his own back garden. I could certainly have expanded this paper to many times its present length, but I forbear, trusting that some of these hints may induce others to follow this fascinating enquiry.

II.—*Researches in the Life of John Macmillan.* By the Rev. H. M. B. REID, B.D., of Balmaghie.

I take this opportunity of communicating certain inquiries which I have carried through in regard to some points in the life of the Rev. John Macmillan, minister of the parish of Balmaghie in 1701, and afterwards the pastor of the United Societies.

1. The first matter is the date and place of Macmillan's birth. In the "History of the Reformed Presbyterian Church," published in 1893, by the Rev. Matthew Hutchison of New Cumnock, it is stated that he was "born in the parish of Penningham, Kirkcudbrightshire, in 1669."* There are at least two distinct mistakes here. Penninghame is in *Wigtownshire*, and Macmillan was not born in Penninghame, but in *Minnigaff* in Kirkcudbrightshire. The usual spot assigned for his birthplace is a farm-house called Barncauchlaw, about four miles from Newton-Stewart and four and a half miles from the Murray Monument. I visited the place in August this year, in company with Dr John Grieve, a great-great-grandson of Macmillan on the female side. Barncauchlaw lies amid wild and picturesque scenery, quite near the coaching road, which is now a summer resort of tourists. We received a warm welcome from the present tenant, whose name is M'Geoch. It was stated by Mrs M'Geoch that the old small house still stands, but has been much added to in recent times. One little inner bedroom was considered most probably the scene of Macmillan's birth. Though there are no Macmillans now at Barncauchlaw, they abound in the neighbourhood. There are Macmillans at Palgown (since 1800), at Glenhead, at Glenlee; and in Newton-Stewart itself the name is frequent both among families and on public buildings, such as the M'Millan Hall.

A few weeks ago I also visited Glenhead, being attracted to it by the genial reference in the "Advertisement" to Mr Crockett's "Men of the Moss Hags." Glenhead is a sheep farm about 13 or 14 miles from Newton-Stewart, tenanted at present by a Mr John Macmillan, who gave me a most cordial welcome, and showed much hospitality. The road to Glenhead is extremely wild and precipitous, and certainly not one to be traversed after a Galloway market day, unless by a very steady foot. Here I found a very old copy (perhaps, indeed, an *editio princeps*) of the

* Page 140.

Confession of Faith, in a fly-leaf of which I deciphered an inscription by Alexander M'Millan, dated 27th December, 1732, bearing that certain persons (presumably his own children) were born at certain dates, as under:—

1.	[Part torn or burned off]	...	...	1664
2.	John M'Millan	...	...	1682
3.	James M'Millan	...	...	1692
4.	Mary M'Millan	...	...	1715

On another leaf is a note as follows:—

"James M'Millan aught this book, God give him grace thereon to look; and I grant it may be restored to my son, John M'Millan, at my death; as witnesseth my hand this 12 of Febuorrie, 1732. James M'Millan."

I at once thought of the minister of Balmaghie, and it occurred to me to inquire whether the commonly received statement of his birthplace and date was settled by any conclusive authority. Mr Thomson of Hightae gives the statement without citing any authority: so does Mr Hutchison. The monument at Dalserf says: "Died December first, 1753, aged eighty-four." The rare tract, called "Observations on a Wolf in a Sheepskin," published in 1753, says "in the eighty-fourth year of his age." But we know how often ages are misstated. If the John Macmillan of this fly-leaf is our man, he was born at Glenhead in 1682, about ten miles from Barncauchlaw farm-house, as the crow flies; and he was 71 years old, not 84, when he died at Broomhill, Bothwell.

I consulted the registers of Edinburgh University, and found that John M'Millan matriculated there in 1695, and graduated two years after A.M., in June, 1697. In 1695 the Glenhead John would be 13 years old, at which age, and even earlier, Scottish students then went to college. A two-years' course was probably enough to secure the Master's degree, being a certificate chiefly of knowledge of the classics. Three years more for divinity studies bring us to 1700, when he was licensed by the Presbytery of Kirkcudbright. Here the question of age emerges again. If born in 1682 he would at license be only eighteen. Nowadays license to preach is not granted till the age of twenty-one. Principal Tulloch, as Mrs Oliphant* relates, was kept back because he was

*Life, p. 26.

not of age. "Why was not I born two months sooner?" he asks, in a note to his fiancée, after he had passed his "trials" for license, but got no license after all. But in the seventeenth century mere striplings were licensed freely. I have noted the following cases from the "Scots Worthies" as illustrations:—

John Welsh, born 1570, minister at Selkirk, Kirkcudbright, and lastly at Ayr, in 1590; aged 20.

James Mitchell, born 1621; M.A. at eighteen.

Andrew Gray, born 1634; licensed at nineteen.

Hugh Binning, became Professor of Philosophy in Glasgow University at eighteen.

Hugh M'Kail, born 1640; licensed when about twenty.

It is quite possible, therefore, that a lad of eighteen might be licensed, and even a year after become minister of Balmaghie. Macmillan's youthfulness might explain his mixture of firmness and wavering in the conflict with the Presbytery.

All authorities agree that Macmillan was connected with the family of Arndarroch, in the barony of Earlston. Oddly enough, Macmillan, for his second wife, married a daughter of Sir Alex. Gordon of Earlston. Brockloch, in Carsphairn, seems to have been the chief Macmillan centre. The present proprietor of Lamloch in that parish has not, however, any evidence of connection with our Macmillan.

2. The question of heraldry is not unimportant, and I now shew *Macmillan's seal*, with the two-handed sword and lion rampant and motto from *Virg. Æn.* i. 630 *(miseris succurrere disco)*. The same crest and motto are used by the Palgown branch, omitting the lion rampant. Another Macmillan family use the lion rampant alone, with a different motto—*age et perfice*.

3. I have obtained a platinotype of fly-leaf of Macmillan's family Bible, which I exhibit. This throws a faint light on the question of his exact branch, favourable to my somewhat daring conjecture as to Glenhead. His youngest child was, strangely enough, christened *Alexander* Janeta or Jonita. The writer in the Glenhead Confession of Faith is Alexander Macmillan, and, according to my guess, would be the grandfather of this little child named after him.

More certain is the information in this fly-leaf on Macmillan's movements after his deposition in 1703. His first child, Jonas, was born in 1726 (12th June), at Balmaghie Manse; but the

second, Kathren, was born in 1727 (December 19), at Eastshields in the parish of Carnwath; hence Macmillan left Balmaghie finally between June, 1726, and December, 1727. This corrects an apparent error in Hutchison's History, p. 158, where the date of his leaving seems to be fixed in 1729.

Macmillan moved about at first from one house to another in Carnwath. In 1727, as we saw, he was at Eastshields; in 1729 at Eastforth; and in 1731 at Henshelwood. Then between 1731 and 1734 he must have removed to Dalserf, since his youngest child, and first deceased, was buried in the churchyard there. His house at Dalserf, from the Societies' minutes, appears to have been called Braehead; but he died not there, as Hutchison (p. 201) states, but at Broomhill, Bothwell (see the Dalserf monument).

This fly-leaf also shews that he publicly baptized all his own children, the mother being sponsor. He could not, indeed, do otherwise, as he had no ordained colleague till 1743, when he was associated with Rev. Thomas Nairn in forming the Reformed Presbytery.

4. The dispute between Macmillan and his Presbytery occasioned a paper warfare. I shew first an anonymous "Narrative," generally ascribed to Macmillan himself, and dating, probably, in 1704. At the close of this long paper, of 62 pp., a note is added, referring to a "Letter to the Parishioners," just published, by Rev. Andrew Cameron, of Kirkcudbright. See Narrative, p. 9. A third print appeared in 1705, containing the Presbytery's "Answers" to Macmillan's paper of "Grievances," and a fourth came out in the same year, in reply to Macmillan's own "Narrative," containing also a copy of the Libel. I exhibit copies of these two last prints, and draw attention to two points—(1) the statement in preface to the "Pamphlet intituled," that Macmillan as a boy was a "Separatist;" (2) in the special "Examination," p. 7, that Macmillan himself is the author of the anonymous "Narrative."

5. I have two further relics of a literary character, and both highly interesting. (1) The "Elegy" on his second wife, also anonymous, but from internal evidence, the work of Macmillan. See especially a passage at page 15 ("The Sprightly Babe," &c.). The date is 1723. (2) The full report of the "Auchensaugh Renovation" of the Covenants, with notes of Macmillan's addresses

and sermons (1712). Especially curious is the passage on page 38, in reply to the charge that he had excommunicated Queen Anne.

6. Lastly, I have brought here "Macmillan's cup," at whose appearance the Brownie of Blednoch was obliged to flee. The cup dates from 1615, and was constantly in use at Balmaghie Communions up till 1795. Macmillan must have handled it hundreds of times.

In the same volume with the Presbytery's "Answers" and the "Examination" are the following interesting prints relating to Macmillan:—

1. Act of Commission of Assembly against Macmillan and Macneil, 1st October, 1708.
2. Their Protestation sent to said meeting of Commission, 29th September, 1708.

This volume is the property of Rev. Mr Hutchison of New Cumnock. The volume containing the "Elegy" and the volume of the "Narrative" belong to Mr Wm. Macmath, Edinburgh. The *seal* is the property of Mr Thomas Rouet, Newton-Stewart.

13th December, 1895.

Mr PHILIP SULLEY, Vice-President, in the chair.

New Members.—Mr Adam J. Corrie, Seawick; Mr William E. Malcolm, Burnfoot; Mr George Neilson, Glasgow.

Donations.—The Proceedings of the East of Scotland Naturalists' Societies, 1891-95; The Common Crow of the United States, from the U.S. Department of Agriculture.

Exhibits.—Mr James Barbour exhibited a piece of Roman glass and a supposed dart, found at Birrens during the recent excavations. Mr John Rutherford exhibited celts found at Tinwald and in New Zealand; an anklet found at Lochrutton, and a tripod found at Glenlee. Dr Chinnock exhibited a bronze chisel belonging to Mr Joseph Gillon Fergusson, of Isle, found in Dumfries. He also read the following description:—

This brass or bronze chisel is exhibited by Mr J. Gillon Fergusson, of Isle, a member of this Society. It measures $6\frac{1}{4}$ inches in length and $\frac{3}{4}$ inch in diameter. Mr W. Ivison Macadam, F.R.S.E., made the following analysis for Dr Joseph Anderson, National Museum of Antiquities.

Copper	86·86	per cent.
Zinc	10·07	,,
Tin	2·95	,,
Iron	0·12	,,
	100	

This implement was found by Mr Moffat, plumber, Dumfries, in an excavation, and by him presented to Mr Fergusson. These tools are very rarely found in Scotland. One found in Sutherlandshire was described, with this Dumfries one, by Dr Joseph Anderson, whose paper will be found in the last volume of the *Proceedings of the Society of Antiquaries of Scotland.* Another from Glenluce is pictured in the same article. Sir John Evans has tabulated about twenty bronze chisels found in England. They are very rare on the continent of Europe, and some have been found at Troy and in Egypt. Dr. Anderson in the paper referred to says: "The use of zinc as an alloy, in conjunction with copper and tin, is not a Bronze Age characteristic, but points to a date less remote than that of true bronze, in which zinc was never present, even as an impurity. If we assume that the cylindrical chisel from Dumfries was probably a mason's chisel, as its shape implies, we have to admit that there is no evidence of hewn or surface-dressed stone-work for which such a tool might be required, until the period of the Roman occupation, when it is also to be remembered that iron was in use. The researches of Göbel have shown that zinc is absent even from the Greek bronzes, which are composed of copper, tin, and lead. Zinc only begins to appear as an ingredient in Roman alloys, and it is only towards the commencement of the Christian era that it begins to be present in them." Dr. Anderson's suggestion that this chisel was a mason's chisel hardly seems to be tenable,

considering its bluntness. See his article from which this quotation is made, April or May, 1895.

COMMUNICATIONS.

I.—*Botanical Notes for 1895.* By Mr JAMES M'ANDREW, of New Galloway.

In July 1895 I spent a fortnight at New Luce in Wigtownshire in hope of gathering there some of the plants of the inland part of the county. I was not altogether disappointed, though the district has not a particularly rich or varied flora. Except in the valleys of the Main and Cross waters of Luce, the surrounding district is moorland. However, here and at Portpatrick I found the following ten plants, as new records for Wigtownshire, to be added to my former list:—

1. *Hieracium gothicum* (Fr.), Backh. In the bed of Luce Water.
2. *Hieracium auratum* (Fr.), Do. do.
3. *Galium mollugo, var. Bakeri*, Syme. At New Luce railway viaduct.
4. *Hymenophyllum unilaterale*, Willd. At Barnshangan Bridge and at Loups of Kilfeather, New Luce.
5. *Centaurea nigra var. radians.* Frequent at New Luce and Portpatrick.
6. *Melampyrum pratense var. montanum.* Near New Luce. The var. *hians* occurs at Pularyan Glen.
7. *Utricularia intermedia.* Airicolland Loch, New Luce.
8. *Barbarea stricta.* Sent to me by Mr. R. C. Lupton, schoolhouse, New Luce, and found growing along the Cross Water; perhaps an outcast.
9. *Calamagrostis epigeios*, Roth. Knock Bay, Portpatrick. This is, as far as I am aware, the first record of this grass for the south-western counties of Scotland.
10. *Potamogeton perfoliatus.* Lochnaw Loch.

It is about sixty years since Dr Macnab recorded *Cladium germanicum* or *mariscus*, for Ravenstone Loch, Wigtownshire. Since then it has not been seen in the county, but this year I was fortunate in finding a tuft of this rush in a Loch west of New Luce, thus confirming this plant for the county, though not for the old locality.

Among other plants seen around New Luce were *Ranunculus Lenormandi* and *Radiola linoides*, in Torrs Warren; *Trollius europæus*; *Prunus padus* (confirmed); *Pyrus malus* (confirmed); *Rubus saxatilis*; *Viburnum opulus*; *Valeriana pyrenaica*, at the Cruives; *Habenaria albida*, near Pularyan; *Eleocharis lacustris*, Kilhern Loch; *Rhynchospora alba*, *Carex filiformis*, Airieolland Loch; *Bromus giganteus*, *Avena pubescens*, *Cryptogramme crispa*, *Botrychium lunaria*, *Equisetum sylvaticum*, *Lycopodium selago* and *clavatum*; *Selaginella selaginoides*, *Chara fragilis*, and *Nitella opaca*. Near Portpatrick I gathered *Carex lævigata* and *Pulicaria dysenterica*, at Knock Bay; and *Corydalis claviculata*, *Epilobium angustifolium*, *var. brachycarpum*, in great abundance. *Potamogeton pusillus*, *Carex pendula*, &c., at Lochnaw. The three forms of *Alchemilla vulgaris*, as given in the Annals of Scottish Natural History for January, 1895, viz.: (*a*) *pratensis* (Schmidt), (*b*) *alpestris* (Schmidt), (*c*) *filicaulis* (Buser), are found in Wigtownshire. I have also gathered the three forms at New Galloway, and the Messrs Linton record them for Moffat. When attention is directed to them, they will be found in the three counties. The Rev. James Gorrie writes me that *Datura stramonium* is spreading at Rigg Bay, Garliestown; and Sir Herbert Maxwell gives the information that *Carum carui* is very plentiful in a meadow at Corvisal, Newton-Stewart.

Kirkcudbrightshire.

I have almost nothing new to record for Kirkcudbrightshire. However, (1) *Sagina subulata*, Presl., and (2) *Avena pubescens*, Huds., are new records for the county, occurring frequently in the Glenkens. I found *Juncus tenuis* in a third station in this county, viz.: Creetown Station, where also I gathered *Galium mollugo*. The rare moss, *Oncophorus crenulatus* (Mitt.), Braithw., is found on the Kells hills, and also on Black Craig *Philonotis fontana*, *var. capillaris*.

I may also add the Hepatic *Cephalozia multiflora* (Huds.), Spruce, and the Lichens *Graphis sophistica* and *Cladonia cariosa*, from New Galloway.

II.—*The Development of Arms and Weapons.* By Mr Philip Sulley, F.R. Hist. S.

"Without weapons, man is the feeblest of animals, but with the weapons which he alone can create, he is the king of them all."

So wrote Thomas Carlyle; and primitive man, when he made his appearance on this planet, must have found himself in immediate need of loose stones and broken tree branches to use as missiles and weapons, alike to keep off his more dangerous animal neighbours, and to take the lives of the weaker ones, in order that he might sustain his own. Necessity, best of teachers, would speedily drive him to select the hardest and most durable of the stones, and such as could be fashioned into a cutting edge; and the stone axe, the flint knife, arrow, and spear-head, gradually supplanted the first casual or fortuitous implements. Indeed, the weapons of this prehistoric time, as it is called, are divided into the rough, the chipped, and the polished; and the highly-wrought jade axes and hammers, weapons which have survived among savages of the Southern Seas down to the present day, bespeak an amount of art and craftsmanship far removed from those associated with our aboriginal forefathers, yet still belonging to the same class.

As gunpowder in later ages, and the terrible weapons of war of modern times, are held to have been the strongest factors in promoting peace, enlightenment, and progress, so in early times did the improvement of weapons lead to what we know as civilisation. The peoples who first learnt the art of working metals, and of making swords, spears, and shields of bronze and iron, could not only conquer their less advanced neighbours, but by the terror and prestige of these arms, turn their newly-won powers to the industrial arts, and thence to decorative art and to luxury. Probably the earliest civilisation, although the one we as yet know the least of, was the American; and metal weapons and armour are to be found among the ruins, and carved on the walls of cities there, which are credibly believed to date back for 4000 years. Those, however, of which we have more knowledge and better records, are the Indian, the Assyrian, and the Chinese. It was the custom, till comparatively recently, to speak of the Bronze Age as separate from, and anterior to, that of iron, but extended researches in Assyria and Asia Minor have proved that these metals existed, and were used at the same time, although, from its easiness for working, nearly all the tools, and all the weapons, including edged ones, were made of bronze. In the Homeric war bronze was the material in use, but iron is repeatedly mentioned under a name which shews why, although harder and more durable, it was not preferred—it is called "difficult to work in."

As the knowledge and use of bronze passed slowly from the east to the west, until the remains are found as frequently in the west and north as in classic localities, so did iron, by which the Romans established their superiority and vast empire, travel in the same direction, to be turned eventually against themselves, when the vigorous and fierce Goth, and Hun, and Vandal confronted the cohorts of Italy, armed with the same weapons. These weapons differed but little in the early civilisations. They were the spear or lance, sword, sling, and bow, while the defensive armour consisted of helmet, round buckler or long shield, and later of a cuirass or corselet, with plates of metal sewn on to woven stuffs or skins. The sword varied greatly, from the short, straight blade of the Assyrian, the hatchet or chopper-like implement of the Egyptians, the grand, shapely bronze of the Grecian, the scimitar of the Arabian, and the well-known short, broad-bladed cut-and-thrust weapon of the invincible Roman foot soldier. The throwing knife, khop or tolla, was in common use among the early Egyptians. The battle-axe, the enlarged successor of the bronze celt, and the lance, doubtless, came in later, when coats of mail and protective armour were used. Such implements of war as scythe-chariots, battering-rams, catapults, or balistas, for throwing missiles into besieged towns, &c., require only passing enumeration.

Varying only in form, in material, in fashion, and finish, the weapons used for hand-to-hand combat must have remained the same for centuries scarcely to be numbered ; and any improvement in attack was met by improvement in panoply, in defensive armour. Further development could, therefore, only be by way of missiles discharged at a distance. The use of the helmet and coat of mail must have speedily brought to an end the art of the slinger, whose stones and bolts would prove powerless against such protection ; while the yew bow and good yard-long arrow were effective only against the lightly armed, or when it chanced to pierce a joint in the armour, or found its way through the holes of a vizor or frontlet. The crossbow, a mechanical improvement on the old bow, giving greater penetrative force, failed against the magnificent suits of mail of the Middle Ages, and it required the irresistible force of the bullet, propelled by explosion, to change the entire system of warfare, and render shield and buckler, corset and suit of steel, of no avail to protect their wearers in the fight.

Like so many other notable inventions, the origin of gunpowder is shrouded in obscurity and doubt. The Chinese, that peculiar race who acquired civilisation so soon, and whose progress as strangely ceased, knew and used it for centuries before it made its way in Europe. The great wall of China (200 B.C.) has embrasures for cannon. It seems very doubtful whether, as an explosive and incendiary agent, it was not used both by the Greeks, Romans, and Arabs, and it is now believed that the secret came westward from India, and it is on record that firearms were used in 690 A.D., at the siege of Mecca. A receipt for making gunpowder is to be found in the writings of Marcus Græcus, 846 A.D., and in the 13th century it was not only used regularly in the war between the Chinese and Tartars, but also at the siege of Seville in Spain by the Moors. This effectually does away with the bogus claims of Roger Bacon and of his predecessors, the monks of Friberg, to whom the credit of the invention was at one time widely given.

As can be readily understood, the mortar, or bomb-shell, was the earliest, as well as the simplest, means of throwing stones into a besieged city, or into the camp of the enemy. Following this, several guns or mortars were made of bars of wrought iron, and joined together by hoops. A notable and early example is to be seen in Vienna, 3 ft. 7 ins. in diameter and 8 ft. 2 ins. in length. The first cannon was, doubtless, a tube of wrought iron, open at both ends, the charge being inserted at one end, which was then plugged with wedges of wood and metal. Engines such as these are first mentioned in 1301, when the town of Amberg, in Germany, had constructed a large cannon; in 1313 Ghent, in Flanders, had stone-throwing guns, and it would probably be from here that Edward III. obtained his cannon, first used against the Scots in 1327. During that century it is undoubted that many wooden cannon were used, as also tubes of copper cased in leather. Muzzle-loading and cast-iron guns gradually supplanted the old breech-loading, wrought-iron tubes; and leaden bullets are said to have first been used in 1346, iron balls coming into use about 1400. Trunnions, to support and balance the gun on its carriage, were first used in Germany in the 15th century, and it must be stated that nearly all the most important improvements in firearms are due to the Germans, who, in the Middle Ages, were also the best makers of arms and coats of mail. These include the rifled barrel.

about 1500; the wheel-lock, 1575; the trigger, 1543; the arquebus, or early musket, 1550; and in later centuries, the iron ramrod in 1730, and the needle-gun in 1827.

Among the early forms of cannon were the mortar, the cannon, the cannon on wheels, the culverin, falcon, and serpentine. This last consisted of a number of barrels grouped on wheels, or on a chariot—even as many as forty barrels—and in others the chariot made more dreadful, though hardly more effective, by the addition of spears and pikes. From the early cannon of hoops and rods, to the modern breech-loading death-dealer, capable of throwing hundredweights for miles, is a long journey, which has been covered slowly and gradually, every generation seeing some small change or development, although the quickest strides have been the latest.

The advantages of placing the smaller cannon tubes on sticks or movable supports, so as to give better and more varied aim, must have been early apparent. Indeed, all the early muskets were supported on crutches, swivels, or rests. The first trace of hand firearms is to be found in the 14th century among the Flemish, and their power in personal contests became apparent in the 15th, when it was found that even the strongest armour was unable to withstand their bullets. These hand cannon were rudely made, and supported on a piece of wood, so that they could not be brought to the shoulder, with the touch-hole on the top. The next development was a rough stock, so as to enable the weapon to be fired from the shoulder; then came the arquebus, which had a match-holder and a trigger. This was a great advance; as was the wheel-lock arquebus, which was not fired by a match, but by sulphurous pyrites, which ignited when caught by the cogs of the wheel, and fired the charge. The uncertainty of the action of the pyrites prevented this form from long continuing, and about 1640 the flint lock gun was invented by the French. To this Vauban, the great general, added a bayonet. The pistol, the diminutive of the hand gun, was first made at Perugia, in 1364, where were constructed "hand cannons the length of a palma," or hand, about 9 inches. The broad barrel blunderbuss, and the short carbine for cavalry use, were later developments, while the percussion cap gun, like the many improved weapons we now know and use, belong to the 19th century. What the future holds in store, whether electricity is to play its part as an agent of war, or ter-

rible explosives are to be brought into use, capable at one fell swoop of destroying a town, a camp, or an army, is a question beyond the scope of this little essay, but it may safely be said that every great development and improvement in death-dealing weapons tend, by their efficiency and terrifying influence, to act directly in the cause of peace.

III.—*Notes of a Visit to some Camps or Forts in the Parishes of Dryfe and Lochmaben.* By the Rev. JOHN H. THOMSON, of Hightae.

On Thursday, 19th September, I set out in search of three camps or forts given in the Ordnance inch-to-a-mile map as about a mile and a half to the east of Hightae, in the parish of Dryfe, in the property of the Duke of Buccleuch. The Annan separates Lochmaben parish from Dryfe, and as there is no bridge across it at Hightae, I had to make a long detour by Shillahill of nearly four miles in length, before I got to Roberthill, a farm opposite to Hightae, on the road between Lockerbie and Dalton. Here I inquired at the gamekeeper's house for the camps, and was at once told by an intelligent man that one of them was near at hand, on the hill to the south, less than half a mile away, and that the others were not far distant. Indeed, he pointed out their sites. The hill is a rising ground that rises to fifty or sixty feet from the level plain through which the Annan meanders. It runs due south for about two miles, and begins not far from the road between Lochmaben and Lockerbie. At its foot, on the west side, it is skirted by the Bengall burn. There was little water in the burn, for it had been a dry September, so it was easily crossed. As I crossed I could see the rampart of the fort in the clump of trees on the brow of the hill about a hundred yards away. The trees seemed as if they had been planted shortly after the visit of the Ordnance Survey, for they are not marked upon the map first published in 1864. They now entirely enclose and cover over the camp, and make its centre dark and gloomy even in the bright sunshine. A carefully-kept hedge fences the clump. I walked round and round the camp, sometimes on its inner, and sometimes on its outer rampart. The ditch varies from four to six, and even eight, feet in depth, and its ramparts look as if taken out of it. Its circle seemed in size to be twice as large as that of the camp at

Lochbank, near Lochmaben station, and it is in the same state of preservation. Its ramparts can be but little altered from the time in which it ceased to be occupied.

I left the camp and clump of trees at the south edge. Here the ground ceases to rise, and becomes a flat table-land, and the view it gives commands the plain beneath. I now walked due south over the field for another clump of fir-trees about two hundred yards away. In its centre I found traces, but not very marked, of the fort given in the Ordnance map. It is very much smaller in size than the camp I had left, but some of the trees on its site had fallen, and may conceal much of what yet remains of it. The trees, too, are dense, and gloom reigned beneath them. As I came out of them, at the south edge of the clump, I found I was close upon the farm-house of Castlehill. The good people of the house were going about the stack-yard, and they readily shewed me the wood in which the camp I had still to visit was to be found. It was about five hundred yards due east from Castlehill. On the way I crossed an old unmacadamised road, that I afterwards discovered connected itself with a road that in two miles' walk led straight into Lockerbie. It is the road I should have taken had I come from Lockerbie.

The camp I was seeking I found, like the one I first visited, to be upon a hill side, and to be in a similar condition of excellent preservation. The ramparts (inner and outer) and the ditch were there, and the size, too, was much the same, only instead of a circle its form was that of a somewhat elongated ellipse. It was also enclosed from the surrounding field by a thorn hedge, and the trees were close together, and shut out the rays of the sun, and gave the whole a wild and weird-like look, as I walked round upon its ramparts and through its centre. The long ends of the ellipse are north and south. On its east side the hill slopes down into the valley, and the rampart looks high and more formidable to scale than on the other sides of the fort, and the stones, of which it seems mainly formed, are easily seen. The ground outside of the enclosing hedge has been all under the plough, which may have obliterated other outworks, did they ever exist; but I came away with a deep impression that time had made little change upon the camp or fort as a whole.

On Monday, 23rd September, I again set out upon my travels. I mention the time because, at the close of my journey, I found I

could not have chosen better. The ground was dry—a great matter for a traveller on foot—and the fields were clear. The harvest was everywhere over. The object of my pilgrimage was to find what the six-inches-to-a-mile Ordnance map styles a supposed Roman camp, and a fort at the north end of the parish of Lochmaben, not far from the village of Templand.

I took the road from Lochmaben that crosses the railway at the station, and runs north north-east for a mile and a quarter, until it reaches the bridge over the Kinnel, a chief tributary of the Annan. Here I turned off eastwards, and took the road to Nethercleugh. In half a mile's walk I came to a gate that opens into an old road that leads north north-west to a stone quarry no longer wrought. This old road I followed, and in ten minutes' walk I came upon the camp in a piece of flat, rough-looking pasture. It was close to the road, and beyond it was the old quarry. It was altogether different from the forts I had visited during the past week. It was square, with a rampart about three to four feet in height, and a ditch in which water lay and reeds were growing. Outside of the ditch was another rampart. The entrance and the road into the camp over the ditch were as marked as the camp itself. The whole had a remarkable likeness to the Roman camps at Birrenswark, but in miniature. I walked along the ridge of the four sides of the outer rampart, and found each of the sides to be about sixty paces in length. The sides of the inner rampart were about fifty. There are no traces of any ditch or rampart beyond the outer rampart. As the workings of the old quarry are close to the camp, it is possible that, if they ever existed, they may have been ploughed down. The ground, however, about the camp looks as if it had never been turned up, and the ramparts are as if unchanged since the palisades that bristled on their ridges were destroyed many centuries ago.

From the camp I went north along the old road, and in five minutes' walk I was upon the road that connects Templand with the Nethercleugh station, on the Caledonian railway. A large plantation of trees lines the north side of this road for nearly half a mile. At the end of this plantation, in the corner, not far from the road, and on a knoll that commands the view southwards, was the fort I was in search of. It is, perhaps, thirty feet higher than the road, but the brackens were, in their luxuriance, breast high, as I climbed up to it, and tried to walk about it, and prevented me

from seeing distinctly its outlines. I could see, however, that it was a circular fort, whose rampart was mainly formed of stones, and that its size was not larger than the camp I had just left.

17th January, 1896.

The Rev. WILLIAM ANDSON in the chair.

New Members.—Messrs George Irving, Newcastle; William D. Mackenzie, Henley-on-Thames; and Samuel Smith, M.P., Liverpool.

Donations.—Report of the British Association for the Advancement of Science.

COMMUNICATIONS.

I.—*Report of the Meteorology of Dumfries for 1895.* By the Rev. WILLIAM ANDSON.

BAROMETER.—The highest reading of the year occurred on the 31st January, when it rose to 30·805 in., and the lowest on the 28th March, when it fell to 28·593 in., giving an annual range of 2·212 in. There were other three occasions on which the barometer fell below 29 in.—the first in the middle of January, the second between the 9th and 12th November, and the third in the middle of December. Although the lowest reading registered was 28·593 in. on the 28th March, there is reason to believe that in the early morning of the 11th November the barometer touched a still lower point. This may be inferred from the circumstance that where readings were taken every hour during the night between the 10th and the 11th, considerably lower readings were recorded. At Leith, for example, where this was done, a reading of 28·352 in. was registered at 3 a.m. The reading of 28·607 in. was registered here at 11 p.m. of the 10th, but the mercury at that hour was still falling, and in all probability, if a reading had been taken two hours later, say at 1 a.m., or two hours before the Leith observation of 28·325 in., it would have been equally low. The mean pressure for the year (reduced to 32 deg. and sea level) was 29·893 in., which is a little below the average of the last nine

Report of Meteorological Observations taken at Dumfries during the year 1895.

Height above sea level, 60 feet.

1895.	BAROMETER.				S. R. THERMOMETER. In shade, 4 ft. above grass.						RAINFALL.			HYGRO-METER.		Dew Point.	Relative Humidity. Sat. = 100.
Months.	Highest in Month.	Lowest in Month.	Monthly Range.	Mean for Month.	Highest in Month.	Lowest in Month.	Mean Maximum.	Mean Minimum.	Monthly Range.	Mean Temperature.	Amount.	Days on which it fell.	Heaviest in 24 hours.	Mean Dry Bulb.	Mean Wet Bulb.		
	In.	In.	In.	In.	Deg.	Deg.	Deg.	Deg.	Deg.	Deg.	In.		In.	Deg.	Deg.	Deg.	
Jan.	30·505	28·355	1·850	29·756	44·4	14 0	35 7	25·6	30 4	30·7	2·22	15	0·38	34·7	33·6	31·9	89
Feb.	30·610	29 633	0·977	30 103	49·5	1 0	36·3	21·0	28·2	29·8	0·81	6	0·60	35·0	33·2	30·3	82
Mar.	30·286	28·593	1·693	29·640	57·4	25·2	46·5	35·4	21·0	41·0	2·77	22	0·38	39·2	38·0	36·5	90
April	30·490	29·124	1·276	29·872	63·3	27 8	55·5	38·9	35·5	47·2	2·40	18	0·68	45·4	43·0	40·2	82
May	30·633	29·710	0·923	30 156	79·6	35 0	66·0	42·9	44·6	54·5	0·21	5	0·08	53·6	49·0	44·5	66
June	30 502	29·577	0·925	30 065	82·5	34·0	69·6	47·4	48·5	58·5	1·33	10	0·83	58·5	52·8	47·2	67
July	30·275	29·490	0·785	29·847	70·8	43·0	65·4	49 6	27·8	57·5	6·28	21	1·48	57·0	53·6	50·2	80
Aug.	30·320	29·265	1·055	29 838	75·6	42·2	66 8	52·7	33·4	59·8	5·73	28	0·89	58·5	55·9	53·5	83
Sept.	30·414	29·43	0·981	30·092	81·3	37·0	69·1	48·4	44·3	58·8	0·56	10	0·21	56·3	54·3	52·1	87
Oct.	30·571	29·156	1·415	29·817	73·0	22·0	52·5	35·0	51 0	43·7	3·42	15	0 72	40·9	39·0	36·3	83
Nov.	30·543	28·607	1·936	29·801	56·0	30·0	49 0	37·8	26 0	43·4	5·41	21	0·77	42·4	40·9	38·5	88
Dec.	30 389	28·840	1·549	29 704	51·6	23·8	41·9	32·7	27·8	37·3	3·89	22	0·75	38·0	36·7	34·9	87
Year.	30 805	28·593	2·212	29·893	82·5	– 1	54·5	38·7	89·5	46·7	35·03	193	1·48	46·6	44·2	41·3	82

WIND—

	N.	NE.	E.	S.E.	S.	S.W.	W.	N.W.	Var.
Days	26½	40½	44	25	41½	55	65½	43½	22½

years. The highest monthly mean was in February, viz., 30·163 in., and the next highest in May and September, with values of 30·136 in. and 30·092 in. The weather in these months was for the most part anti-cyclonic, with very light winds and small rainfall; but as regards February with the severest frost and also the heaviest snowstorm of the year. The lowest barometrical means were in March, with 29·640 in., and December, with 29·704 in. But January and November had records almost equally low, and in these months the weather was for the most part changeable and unsettled, with occasional strong gales and heavy rain, and in March with a good deal of snow.

TEMPERATURE (in shade 4 feet above the grass).—The highest single day temperature of the year was on the 7th June, when 82·5 deg. was recorded; but the maximum of the 25th June was little short of this with a reading of 81·4 deg., and in September there were three days in which the temperature reached or exceeded 80 deg., viz., the 9th, the 27th, and the 28th, ranging from 80 deg. to 81·3 deg. While the absolute maximum was 82·5 deg. the absolute minimum or lowest temperature of the year was 1 deg. below zero, which occurred twice on the night of the 8th and again on that of the 10th February, giving an annual range of 83·5 deg. The warmest month was August, with a mean of 59·8 deg., the next warmest, September, with a mean of 58·8 deg., June had 58·5 deg., and July, which is often the warmest month of the year, had only 57·5 deg.; but it was a cloudy and showery month, with a marked deficiency of sunshine, which may account for its being under average in point of temperature. The mean temperature of the year, taken as a whole, was 46·7 deg. The average of the last nine years is 47·7 deg., so that the mean of 1895 is 1 deg. below average. The months in which the temperature was in excess of the normal were April, by one and a half deg.; May, by two deg.; June, by fully three-quarters of a deg.; August, by two deg.; September, by nearly four deg.; and November, by three-quarters of a deg. The months in which there was the greatest deficiency were — January by six to seven deg.; February, by ten deg; July, by one deg.; and October, by two and three-quarter deg. Thus, while there was an excess of rather more than ten deg. in the monthly means, there was a deficiency of fully twenty, so that it can be no matter for surprise that the annual mean for the past

year fell short of the average. Although August was the warmest month, it was marked by an unusual number of days on which more or less rain fell (no fewer than 28 out of the 31, with occasional thunderstorms); but while there was less sunshine than usual, the nights were generally warm, as is shewn by the high mean minimum of 52·7 deg., which is higher than that of July by 3 degs. The finest months of the year, and the most exceptional in point of warmth and dryness, were May and September, and particularly the latter. The first two months of the year were characterised by a protracted frost of unusual severity, which set in in the concluding days of December, 1894, and continued with little intermission till the 4th or 5th of March. The mean temperature of January was only 30·7 deg., as compared with average of 37·3 deg., and that of February as low as 28·2 deg., which is about 10 deg. under the normal. It will give some idea of the extraordinary character of this long spell of frost when it is mentioned that the protected thermometer fell below the freezing point on 51 out of the 59 days comprised in the first two months of the year, and that the aggregate amount of degrees of frost was 207 for January and 288·9 deg. for February, in all 495·9 deg. The climax was reached on the 8th and 10th February, on which two nights the mercury fell to 1 deg. below zero, a rare circumstance in this district. In some parts of the country considerably lower readings than this were recorded, as at Drumlanrig, for example, where the thermometer fell to 11 deg. below zero, and at Braemar, where it went down to 17 deg. below. During the week from the 8th to the 14th February the themometer only once rose above the freezing point, and one day, the ninth, the maximum was as low as 19 deg., while the highest of the minimum or night readings was only 9·7, and the mean temperature for that week was no more than 16 deg. It need hardly be added that during the greater part of the month the river Nith was frozen over, and that great damage was done by the bursting of water pipes, and no small amount of inconvenience occasioned by the scarcity of water owing to its being frozen in the supply pipes. In some instances this was found to be the case with pipes sunk three or four feet below the surface of the ground. As to the other months in which frost occurred, there were six days in March with an aggregate of 18·2 deg., six in April with an aggregate 10·5 deg., twelve in October with an aggregate of 65·8 deg.;

four in November, aggregate 6·7 deg.; and thirteen in December, aggregate 42·9 deg. This makes the total number of days in which the protected thermometer fell below the freezing point 100 and the aggregate degrees of frost 640, which is considerably in excess of any previous record during the period of observation at this station. In connection with the intense and protracted frost of the first two months of the year, it may be asked if any explanation can be given tending to account for it. I have no doubt that the proximate cause was the distribution of pressure during the period while it lasted. When we look into the details we find that the prevailing winds were almost constantly from the north and east. In ordinary winters the greatest pressure is commonly over Spain and the adjacent parts of the Mediterranean and Atlantic, and decreases towards Iceland and the north of Europe. Hence the prevailing winds are largely from the south-west and bring mild and moist weather. But last year this state of things was reversed. The greatest pressure was over the Arctic regions, and over Scandinavia and West Russia, giving rise to northerly and easterly winds, and making us participants in no small degree of the Arctic severity of the climate from which they came. This is an explanation so far, but we cannot carry it any further back, or tell why there should have been a different distribution of pressure last winter from what is most common, although doubtless it had its causes. Perhaps the extremely sudden change of temperature which took place in the beginning of October should not be passed over without remark. The mean temperature of the last week of September was 64·8 deg., which is higher than that of any other week in the year by more than 2 deg. The mean temperature of the first week of October was 46·9 deg., shewing a fall of almost 18 deg. in a single week. But if we compare with the last week of September the last week of October, say from the 24th to the 30th, we find the mean of the latter period to have been only 35·8 deg., so that in four weeks the mean temperature had fallen to the extent of 29 deg.; that is to say, from the warmest summer temperature to the average of the coldest period of winter.

RAINFALL.—The total amount of rain or snow that fell during the year was 35·03 in., and the number of days on which it fell was 193 (rain 179, snow 14); but on 27 of these the fall did not exceed one-hundredth of an inch. The heaviest fall in 24 hours was on

the 26th July, when 1·48 in. was registered. But there were other two days in the same month when the fall exceeded one inch, viz., the 2nd, in connection with a thunderstorm, and the 25th, when the records were 1·05 in. and 1·15 in. These were the only occasions on which the fall exceeded one inch. July was the wettest month in the year, with a total of 6·28 in., spread over 21 days; and the next wettest were August, with 5·73 in., and November, with 5·41 in. These records were considerably above average, and those of March and April were slightly so. The rainfall of all the other months was under average, and some of them in a remarkable degree. The driest month was May, in which only 0·21 in., or less than a quarter of an inch, fell. The next was September, with very little more than half an inch, viz., 0·56 in., and February had also less than an inch—0·81 in. In these three months the rainfall amounts to no more than 1·58 in., while the ordinary mean for them is 7·13 in. There were several periods of drought during the year. The first was in February. Between the 8th and the 28th of that month, a period of about three weeks, rain fell only once, and only to the amount of four-hundredths of an inch. Again, in May and June, there was an extended period beginning with the 1st of May and continuing to about the 25th of June, a period of about eight weeks, during which the rainfall did not exceed 0·48 in. The rainfall for the whole year, 35·03 in., shews a deficiency from the average of the last nine years of about 2 in.

HYGROMETER.—The mean dry bulb for the year was 46·6 deg., almost exactly the same as the mean annual temperature, which was 46·7 deg. Mean wet, 44·2 deg., giving for the dew point 41·3 deg., and for the relative humidity 82—saturation being equal to 100. The only remark to be made upon this is that the mean temperature of the dry bulb is about 1 deg. under average, corresponding with the similar deficiency in the mean temperature of the year, and that the relative humidity of 82 exhibits a like correspondence with the diminished rainfall, the average of nine years being 83.

THUNDERSTORMS were not frequent during the year. So far as I have observed, there was one in April on the 24th, one in May, also on the 24th (which was repeated to some extent on the following day), two in July in the beginning of the month, two in August on the 6th and the 27th, and one in September on the 9th.

The most severe of these were those which occurred on the 1st and 2nd of July and on the 6th of August. I have noted that on the 2nd of July there was incessant thunder and lightning from 1 to 2.30 p.m., and again that on August 6th a severe thunderstorm came on about 4 p.m. and continued till 5.20. There was a remarkable phenomenon witnessed at 9 p.m. of the 13th March, which was probably to be traced to electrical causes. This was a broad band of whitish light, somewhat resembling smoke, and stretching across the greater part of the sky, from N.E. towards S.W. I have observed that in some reports the aurora is said to have been very conspicuous that night in different parts of the country, and I suppose that what I saw must have been of this nature, although in some respects it was different from any aurora I ever saw before, more especially in its great extent and apparently fixed character, and in the absence of those streamers or rapid flashes of light which we usually see in connection with that phenomenon.

WIND.—With regard to the directions of the wind, it appears that during the past year those from a northerly and easterly direction—N., N.E., E., and N.W.—blew during 154 days; and those from a southerly and westerly direction—S., S.E., S.W., and W.—during 187 days, while 22 were variable. This differs from what is usual, only in a somewhat greater preponderance, of northerly and easterly winds.

In connection with the report on the movement of the barometer, I may take this opportunity of offering a remark on the extraordinary readings recorded on the 9th of the present month, although it does not properly belong to the subject of this paper. As I have already stated, the highest barometer reading for the past year was 30·805 in. on the 30th January. But it was also the highest recorded for the nine years during which observations have been taken here, the others ranging from 30·632 to 30·805. But on Thursday of last week the mercury rose to the unprecedented height of 31·106 in. As far as information goes, the highest readings recorded in Scotland previously during the present century were 31·01 in. in February, 1808, and 31·05 in January, 1820—both taken at Gordon Castle, Banffshire, and the latter corroborated by a similar reading in Edinburgh. It is by no means improbable, therefore, that the abnormal reading of the 9th January this year is the very highest on record—a circumstance which could not be passed over without special notice.

II.—"*Kirkbean Folklore.*" By Mr SAMUEL ARNOTT, Carsethorn.

We naturally begin with New Year's Day, but in the parish its celebration was conducted in the usual way. The custom of "first footing," which has now almost fallen into desuetude, was, until comparatively recently, almost universal throughout the parish. As in other places, the "first foot" went to the houses of his friends with his bottle of whisky with which to treat all the inmates, who, in return, expected that he should partake of the contents of the house bottle and of the shortbread or currant loaf provided for the occasion. Certain individuals were, from some cause or other, considered to bring misfortune to the house if they were the first to cross its threshold on New Year's Day. Besides these ill-omened individuals, there were others presenting certain physical characteristics who were equally unlucky to the household they were the first to enter that day. These were "fair" or "red-haired" people, and those who were "flat-footed." In the course of my inquiries I heard of one woman who was considered an unlucky "first foot," and on asking why this was so, I was told that it was "because she was flat-footed."

To the youthful members of the population who had the fortune to be under the tuition of a teacher who kept up the "good old style," Candlemas day—the 2nd of February—was one of the most welcome of the year. It was the day of the "Cannelmass Bleeze," when the stern discipline of the dominie was relaxed (one would almost say was suspended) and the day given over to mirth and jollity. The Candlemas "bleeze" was an unknowing survival of the pre-Reformation feast in honour of the purification of the Virgin Mary, at which candles were burned, or perhaps of the ceremony spoken of by Herrick, of which he says :—

Kindle the Christmas brand, and then
Till sunset let it burn,
Which quenched, then lay it up again
Till Christmas next return.

Part must be kept, wherewith to teend
The Christmas log next year,
And where 'tis safely kept, the fiend
Can do no mischief there.

I have been unable to trace anything in the celebration of the Candlemas "bleeze" which would explain why the word "bleeze"

—which, as you all know, is the Scottish for "flame"—was used, except in one instance afterwards related, and can only come to the conclusion that the word has been handed down for generations. The Candlemas "bleeze" celebration appears to have taken a slightly different form in the various schools, and in some does not seem to have been observed at all, In some schools this was the day on which the "coal money," as the fee given to the teacher for firing was called, was taken to the school. In others the "coal money" was taken on some other day, or a peat taken regularly by each scholar, but in this case the money was given to the teacher as a Candlemas gift. In some schools a boy and girl were respectively made "king and queen," the honours being, as it were, put up to the highest bidders by their falling upon those who gave the largest sum of money to the schoolmaster. I have been told of one instance in which the teacher always left two particular scholars to the last, so that they might be able to hand a larger sum than any who had preceded them. It is gratifying to think that this was not general, however. Sometimes the teacher gave the "king and queen" a present, which frequently consisted of a knife for the boy and a pair of scissors for the girl. After the teacher had received his gifts or his "coal money," as the case might be, all the scholars were treated to refreshments, which usually consisted of "toddy" and a hard biscuit, known as a "bake." The toddy shows us what progress has been made in ideas of the fitness of things since these days, but the description I have received of it leads one to believe that its effect upon the pupils would add little to the hilarity which followed. It is said to have been "hot water, sugar, and a little whisky"—"a very wee drap o' whusky" is the most graphic way of putting it I have heard. In some schools cordial was substituted, and although not in Kirkbean I may be pardoned for introducing it. At my first school in Dumfries port-wine negus or coffee were offered from which to choose. The toddy was handed round in a jug, the bearer of which also carried a glass, into which the steaming beverage was poured, to be quaffed by the expectant juvenile. When this was over desks and seats were put out of the way, and games succeeded. Generally speaking, these were of the usual character, such as "blind man's buff," "hunt the slipper," &c.; sometimes the sport seems to have been more demonstrative, and one could perhaps best describe it by the well-known expression

of "pandemonium let loose." What are known as "billet guns," *i.e.*, pop-guns made from the wood of the "boor tree" or alder, were freely used, and dancing of the most boisterous nature indulged in. What the dancing meant may be realised when it is said that most of the children wore clogs, and the noise was so deafening that the "maister" had frequently to hold his hands over his ears and to run out of the school. Various competitions were also engaged in, for which the reward was an orange. These were hardly so educative as a "spelling bee," as may be understood when it is said that there was a "shiling" competition and a "scraighing" combat. In the former the competitors stood in a row facing the "dominie" and one of the elder scholars, who officiated as judges, and the orange was awarded to the one who "shiled" best, *i.e.*, the one who made the ugliest face. One of my informants, who once acted as one of the umpires, still speaks with zest of the performance of one boy, who so excelled the others in the delightful accomplishment of "shilin'" that he was always the winner of the luscious fruit, then far more prized than now. The "scraighing" contest (I prefer to use my informant's expressive Scotch for the emasculated English one of screaming), while it appealed less to the ocular organs, must have been something of a trial to the organs of hearing, as it consisted in "scraighing" as loudly as possible. The boy who made the most discordant sound received the orange. The only example of the use of a bonfire, or indeed of the use of fire of any kind, in the observance of the Candlemas "bleeze" that has come within my hearing, was at Southwick school, in an adjoining parish, but as children belonging to Kirkbean took part in the operations I may introduce it as appropriate to this paper. For some days before Candlemas day the children busied themselves during the dinner hour in collecting a pile of whins and other brushwood. On the day itself they made an effigy with a stake dressed in an old coat and hat, and placing it in the centre of the pile set fire to the heap, and consumed the effigy. This is what they knew as the Candlemas "bleeze," but very singularly, the effigy they burned was that of Thomas Paine, the author of the "Age of Reason," but who was only known to them as "Tom Paine, the infidel." This must have been a comparatively modern introduction, as Thomas Paine did not die until 1809, and his effigy was being burned as the Candlemas "bleeze" about 1830.

How long before that it may have been carried on I cannot ascertain. At this school the scholars were afterwards treated to toddy.

The only saying applicable to Candlemas which I have heard in the district was the familiar one :—

> If Candlemas Day be fair and clear,
> There'll be twa winters in the year ;
> If Candlemas Day be wet and foul,
> The half o' winter's gane at Yule.

The next season which has been remembered by custom or by saying is March, but this had nothing beyond the familiar saying : "A peck o' March dust is worth a king's ransom." "A peck o' March dust's worth a bowe o' aul' meal."

The first of April was, as may be expected, a popular day among the practical jokers, who delighted in the fancied license to tell "fibs." The sport of "Hunt the Gowk" has always been a favourite one, but it is needless to detail the character of the celebration of All-fools'-Day, when people were sent on fruitless errands, or led into embarassing situations to give sport to the practical joker.

The usual superstition regarding St. Swithin's Day appears to have been prevalent, and it is still spoken of, although now treated with but scant respect.

The cutting of the Kirn, as the last patch of corn was called, was performed with some little ceremony. In the days when reaping hooks were used instead of scythes, a small patch of corn was left standing until the last. The reapers then took up a position several yards from the "Kirn," and in turn threw their shearing hooks at the patch of corn. The one who succeeded in cutting it in this way was proclaimed the victor, and the Kirn was taken into the house, and generally decorated with ribbons, and placed in the apartment in which the dancing which followed was held. On the supercession of the reaping hook by the scythe the practice on some farms was altered, and the scythesman was placed a short distance from the corn, blindfolded, and told to walk up to it and cut it with the scythe. This was frequently difficult, and much amusement was caused by the efforts of the scythesman to walk in a direct line, as the feat is by no means so easy as it looks. The sweep of the scythe in the hands of a blindfolded man was at times rather dangerous, and the practice fell into desuetude. The

celebration of the feast of the Kirn, or simply "The Kirn" or "Harvest Home," was very general, and occasioned much enjoyment among the young folks. There seems to have been nothing unusual in the feasting and enjoyment in the parish, and readers of Scottish literature are familiar with the references to the Kirn in song and story, so that it is unnecessary to detail here the feasting and dancing with which the ingathering of the harvest was welcomed. The Kirn is now almost obsolete in the parish.

"Hallowe'en," celebrated on 31st October, was a red-letter day in the calendar. During the day the children amused themselves by singing :

Hallowe'en ; the nicht at e'en
The fairies will be ridin'.

A variation of this, which was in use in Kirkbean a number of years ago, was, it seems, as follows :

Hallowe'en ; the nicht at e'en
The fairies will be scraighin'.
Din Doup had a wife,
Her name was Peggy Aiken.

It was at night, however, that the celebration was in full swing. The young folks gathered together and burned nuts in the fire. As now, the two nuts were put in together. If both burned brightly the young man and woman whom the nuts were supposed to represent are or will be true lovers, and have happiness in their married life. If one jumps away that one was unfriendly or unfaithful. The pulling of the kail stock was a part of the celebration now quite obsolete in the parish. The young folks were blindfolded, and made their way to the garden of a bachelor or old maid, where they pulled the first "kail stock" they touched. On re-entering the house the "stocks" were eagerly examined to see what fortune was in store for those who had pulled them. If the stalk was tall and straight the future husband or wife would be comely and straight. On the other hand, if short and crooked, the partner would be unattractive. If the pith was bitter the husband or wife would be bad tempered ; if sweet, of an agreeable disposition. If only a little earth adhered to the root the spouse would be endowed with but little of this world's gear, but if a considerable quantity of the soil was lifted, there would be a fortune. The stocks were then placed over the door, and the first person who entered the house afterwards was supposed to be of the same

Christian name as the future husband or wife. In order to ascertain the Christian name of her future husband or its initials, a young woman would pare a potato, taking care to keep the skin in one piece, and place the skin above or behind the door. The Christian name of the first man who came into the house was held to be the same as that of the future spouse. The other way was by paring an apple, the skin being again kept in one piece, and then throwing the skin over the left shoulder. In falling it was supposed to assume the form of the first letter of the future husband's name. It was also quite a common thing for the young women to eat an apple before the looking-glass at midnight on Hallowe'en, with the expectation that the face of their future husbands would be seen in the mirror as if looking over their shoulders. A story is told of one mischievous man of rather unprepossessing appearance, who concealed himself in the chamber of a young woman who was about to practice this form of divination. It is said that he looked over her shoulder at the time she began to eat the apple, and that the astonished damsel called out in her amazement: "Losh me, im a tae get Ned Tamson?" I suppress the real name, although the practical joker has long since gone over to the majority. The eating of the "champers" was one of the great events of the Hallowe'en gathering. The potatoes were pared, boiled, and well bruised by means of the wooden "beetle" used for the purpose; the young men of the party relieving the fair sex of the duty of "beetling" the potatoes. Butter and milk were added, and a ring, sixpence, and thimble, and often a button, placed in the potful of "champers," round which the company gathered, seated on the floor, and helped themselves from the pot with spoons. As is well known, the one who got the ring was understood to be the first to be married; the one who got the sixpence was understood to obtain riches; and the unfortunate finder of the thimble and button were respectively to be old maid and old bachelor. Diving for apples from a tub was also engaged in, and led to much merriment. The younger portion of the inhabitants found much pleasure in their lanterns, made out of turnips, upon which were carved grotesque and other figures, which showed well when the lantern was lighted up. At Carsethorn the children placed their lanterns in the tide after being lighted, and let them float away. This is quite extinct, and turnip lanterns seem almost things of the past.

The celebration of Christmas was not observed.

On Hogmanay, the last night of the year, the children went to the houses in bands, singing the following:

Hog, nog, nay, tol, lol, lay,
Gie's a piece o' bread and cheese
And I'll rin away.

Or

Get up aul' wife and shake your feathers,
An' dinna think that we are beggars;
We're but wee weans cam oot to play,
Get up an' gie's oor Hogmanay.

It can hardly be said that this appeal was couched in the most polite terms, but the "aul' wife" was, as a rule, quite willing to overlook the want of courtesy, and cheerfully gave bread and cheese to the carollers.

In connection with deaths there are two or three customs and beliefs which were at one time observed. The first and second do not appear to be now observed, but the third is occasionally practised. At one time, immediately after a person died, the clocks in the house were all stopped. Another practice was to cover up the looking-glasses. I cannot discover why either of these things were done. Since writing the foregoing a friend called my attention to the following note which appeared in the *North British Advertiser* of 4th January, 1896, above the signature, J. M. Mackinlay, F.S.A., Scot.:—"*Covering Mirrors after a Death.*—This custom is well known in Scotland, but its origin is seldom understood by those who practise it. To find its explanation we have to look to the beliefs of uncivilised races. The following account of the custom is given by Dr J. G. Frazer in his 'Golden Bough' (vol. i. p. 146):—'We can now explain the widespread custom of covering up mirrors, or turning them to the wall, after a death has taken place in the house. It is feared that the soul projected out of the person in the shape of his reflection in the mirror, may be carried off by the ghost of the departed, which is commonly supposed to linger about the house till the burial. The custom is thus parallel to the Aru custom of not sleeping in a house after a death for fear that the soul, projected out of the body in a dream, may meet the ghost, and be carried off by it. In Oldenburg it is thought that if a person sees his image in a mirror after a death he will die himself. So all the mirrors in the house are covered up with white cloth. In

some parts of Germany, after a death, not only the mirrors but everything that shines or glitters (windows, clocks, &c.), are covered up, doubtless, because they might reflect a person's image. The same custom of covering up mirrors, or turning them to the wall, after a death, prevails in England, Scotland, and Madagascar.' The statement in the last sentence regarding the custom north of the Tweed is confirmed by the late Mr James Napier, in his 'Folk Lore in the West of Scotland.' On page 60 of that work he says:—'After death there came a new class of superstitious fears and practices. The clock was stopped, the looking-glass was covered with a cloth, and all domestic animals were removed from the house until after the funeral.' Mr Napier does not attempt to explain the practice, but the reason given in the 'Golden Bough' is quite an adequate one." It will be observed that this is no explanation of the stopping of the clocks. With regard to the other custom or belief, it is actually still observed, and has come under my own notice. One night, when present at an "encoffining," a young woman, who was taking her last look at the little child, remarked that it was the first corpse she had ever seen. "Then," remarked another person present, "you must touch it." She did so, and was told that she should draw her hand from head to foot. I afterwards ascertained that it was supposed that the one who saw a corpse for the first time, would dream about it the same night unless he or she touched it in this way. Although there was no "wake" held after the fashion so prevalent in Ireland, a number of years ago, it was the custom for one or more of the neighbours to sit in the apartment in which the corpse lay, or in the adjoining one. This was kept up by day and night until the funeral, which frequently did not take place until eight days after the death. This custom gave an opportunity for showing the neighbourly feeling so common in country districts, which is often unseen in ordinary intercourse, but is so apparent in times of sickness and sorrow. The saying, "Happy is the corpse the rain rains on," is sometimes remembered, although in varying words. I have been unable to hear of any superstitions connecting deaths and bees, similar to those spoken of by the late Mr Dudgeon in his paper on "Bee Folklore," which appears in this Society's "Transactions" for the session 1891-92. I have made particular inquiry about these, but no one seems to have heard of them in Kirkbean. The custom of having a few friends and neigh-

bours present at the "encoffining" of the dead is still kept up in the parish, although on a more limited scale than was formerly the case. A number of years ago more people were invited to be present. Then, as now, whisky and biscuits were handed round, and partaken of in a sparing manner. The custom of providing refreshments at funerals has now quite died out, and since I went to reside in the parish more than eleven years ago. I have not seen a funeral at which there has been even a single "service" of refreshments, while formerly there were three: one on the company assembling, another just before the departure for the churchyard, and a third on their return. This was gradually reduced to one "service," just before leaving for the burying-ground, and this, again, was abandoned, but a tea is generally provided for the male relatives and one or two others. In connection with the "service" of whisky and biscuits and shortbread, it must be remembered, as an excuse for the custom, that not so long ago the coffin was carried by bearers all the distance, often some miles. I often think how much more impressive than the short burial service in the house is the way in which this part of the ceremony is still conducted in Kirkbean. The minister comes outside, generally to the door of the house, and those who have come to the funeral gather round, and a prayer is offered.

There is nothing very noteworthy in regard to marriages, but the following may be mentioned. It is said that "Happy is the bride the sun shines on;" and in addition to the modern custom of scattering rice over the bride and bridegroom on their departure, the old one of throwing old shoes at them is still kept up. The superstitions regarding the bride's dress are limited, and seem confined to the following. It is unlucky to be married in a green dress or to wear the bridal gown until the marriage ceremony. Something old should also be included among the wedding garments, and also something which has been borrowed. The custom, so highly appreciated by the children, of scrambling pennies and half-pennies on the occasion of a wedding is not quite obsolete; and, whenever possible, the bridesmaid and "best man," as the groomsman is called, accompany the newly-married couple to church the first Sunday after the marriage. In accordance with the wide-spread superstition, marriages in May were considered unlucky.

Not unfamiliar to many is the not uncommon custom of putting a piece of money into the pocket of a child's new garment to "hansel" it. It was only lately, however, I learned that it was a common thing a good many years ago for a boy who had become the happy wearer of a suit of new clothes to go the round of the village to show them to the neighbours, who generally "hanselled" them by giving him a half-penny or a penny.

It seems that there was a custom years ago, and may still be, to put a coin under the mast of a vessel. This I heard of about two years ago when the masts were taken out of an old vessel which was in course of undergoing repair. It was generally silver coins, but in this case they were of the baser metal. I am in possession of a half-penny which was under the foremast of this vessel, the coin under the mainmast being a penny.

The late Mr Dudgeon, in the paper to which I have already referred, speaks of the belief that it was unlucky to buy or sell bees, or rather to let money pass between the old and the new owner. I have heard this said, and that the bees were taken away, and a sum of money, generally £1, left on the stand on which the hive had been placed. In the same paper it is said. "An old man I have heard of in Kirkbean, who died about thirty years ago, always maintained that the bees sang a hymn on Christmas day. This pretty superstition has, I fear, quite died out." I have made enquiry regarding this, but cannot hear anything about it, and I have been equally unsuccessful in discovering any other remains of bee superstitions.

In my paper on "Plant Superstitions," which appears in this Society's Transactions for the session of 1892-93, I included several superstitions which were believed in in Kirkbean. I fear to repeat these would unduly extend this paper, and I have heard of little to add to this part of the subject. Here is, however, an instance of the way in which the supposed properties of the rowan tree were applied. An old woman residing in one of the villages in the parish gave a boy a twig of a rowan tree and said, "Pit that aboon the byre door; an' the coo'l be nane the waur o't." Few will question the truth of her statement.

I have endeavoured to find out if anything lay behind the custom of young or unmarried women generally carrying a small piece of Southernwood, or "Lad's Love." when going to church.

I think this may originally have been with a deeper motive than that of enjoying the fragrance of the "Sidderwood."

One superstition, almost, if not quite, obsolete, was that it was unlucky to meet a "cross-eyed" person the first thing in the morning. Another, with which I shall conclude, was that if people quarrelled about fish or fishing the fish would be sure to leave the place.

14th February, 1896.

Mr PHILIP SULLEY, Vice-President, in the chair.

New Members.—Mrs Johnstone, Victoria Terrace; Rev. Roger Kirkpatrick, Dalbeattie; Col. J. Maxwell Witham, Kirkconnel; Benjamin Rigby Murray, Parton; Robert A. Yerburgh, M.P., Chester.

Donations.—A Treatise on Education, by Dr George Chapman, rector of Dumfries Grammar School, 1773, presented by the committee of the Mechanics' Institute; Transactions of Edinburgh Geological Society, 1895; Annals of the Andersonian Naturalists' Society; Transactions of New York Academy of Sciences; Proceeding of the Rochester (New York) Academy of Sciences; Proceedings of the Philadelphia Academy of Natural Sciences; Proceeding of the Nova Scotian Institute of Science.

Exhibits.—Mr Shaw exhibited a pack of Indian cards and some Indian hand pictures, done at Madras. Mr Sulley exhibited a deed engrossed in the reign of Charles I., and two remarkable jewel cases made in the 10th century; also an old seal of one of the Jameses.

The Rev. William Andson was elected joint-librarian with Mr Lennox.

COMMUNICATIONS.

I.—*Adder Beads and Children's Rhymes.* By the late Mr JAMES SHAW, of Tynron.

About a week ago I visited an old lady who is between 80 and 90 years of age, resident in Tynron, and from whom I procured the adder bead which I now produce. It was an heir-loom

in her family. The story of its finding is that a shepherd, she believes, in the parish of Closeburn, had observed a number of adders very fierce and very agile. He got alarmed, and hastened from the place, throwing off his plaid, which tradition says is a good plan to divert the ferocious attack of either adders or weasels by taking up their attention for a while. Next morning he returned to the spot to discover that his plaid was pretty much eaten, or, as the old lady said, "chattered." The adders were gone, and while gazing on the knoll on which he had seen them he discovered this bead. The Tynron lady's grandmother wore it around her neck as a charm or amulet. The same lady's father once got the offer of £5 for it, which he refused. I may say that I have already been offered more than I paid for it. A Dumfries naturalist told me they were common, and that a friend of his had nearly a score, but on enquiring at aforesaid friend I found his were spindle whorls of stone. I believe they are very uncommon, at least in Dumfriesshire. There is not one in the Grierson museum, as you may judge from the catalogue. Looking at this bead, it might with more propriety be called a glass ring. The best account I find of them is in Brand's "Popular Antiquities," vol. iii., p. 286, edition 1888. Pliny, the Roman writer, refers to them. Pennant, in his "Zoology," says the tradition is strong in Wales. The wondrous egg, or bead, was considered a potent charm with the Druids. It used to assist children in cutting their teeth, or to cure chincough, or to drive away an ague. Camden gives a plate of these beads, made of glass of a very rich blue colour, some of which are plain and others streaked. The *ovum anguinum*, or Druid's egg, has been frequently found in the Isle of Anglesey. It has been found in Cornwall and most parts of Wales. The Welsh name for them is *serpent's gems*. Mr Lloyd says they are small glass annulets about half as wide as our finger rings, but much thicker, usually of a green colour, though some are blue and others curiously waved with blue, red, and white. Pliny says they are hatched by adders. These beads are not unfrequently found in burrows. Bishop Gibson engraved three found in Wales. In Brand's "Antiquities" no mention is made of them being found in Scotland. The tradition that they have been produced by serpents is current in all the districts in which they have been found.

Mr John Corrie, member of this Society, has collected a number of Folk Riddles, from the parish of Glencairn (*vide* Transactions, 1891-92). It struck me that I might supplement that paper with examples of a few more current in Tynron, but I fear destined soon to become unknown. I shall also give examples of other rhymes, but take the Folk Riddles first.

What is it that you have, and I have not, and I use it more than you do? Ans., Your name.

What goes through the wood and through the wood and never touches the bushes? Ans., A sound.

What goes through the wood and leaves a bat on every bush? Ans., Snow.

As white as snaw, but snaw it's not;
As red as blood, but blood it's not;
As black as ink, but ink it's not;

Ans., A bramble, whose blossoms are white, and its fruit first red and then black. It equally well suits the gean. or wild cherry.

Through the wood and through the wood,
And through the wood it ran,
And though it is a wee thing
It could kill a big man.

Ans., A bullet, which runs through the wooden tube of the gun.

I have a little sister, they call her Peep Peep,
Over the waters deep, deep, deep,
Over the mountains high, high, high,
And the poor little creature has just one eye.

Ans., A star.

What is it that God never saw, kings seldom see, and you and I see it every day? Ans., Your equal.

What goes up the water and up the water and never comes to the head of it? Ans., A mill-wheel.

There was a man who saw a pear tree, and pears on the tree. He stretched out his hand and plucked, but he neither took pears nor left pears on the tree. This is a verbal quibble. The explanation is that he took *one* pear and left *one*.

Here is a riddle we have upon a beetle, or, as the children call it, a "clock." The description is quaint and graphic.

Wee man o' leather
Gaed through the heather,
Through a rock, through a reel,
Through an old spinning wheel,
Through a sheep shank bane,
Sic a man was never seen.

The following is a curious piece of natural history: There was a leak in Noah's ark. The cat tried to stop it with its paw, but in vain; then the dog tried to stop it with its nose, but in vain; then the men tried to stop it with their knees, all in vain. Noah's wife prayed, and it was stopped; but the cat's paw, the dog's nose, and men's knees remain cold unto the present day.

The following is a reminiscence of the time before bridges: What goes through the ford head downmost? Ans., The nails on a horse's shoe.

The next riddle gives us a glimpse of drudgery which sanitary engineers are rapidly rendering obsolete. What goes away between two woods and comes back between two waters? Ans., A woman, when she goes with her empty wooden stoups to the well and comes back with them filled.

The following riddle is rather gruesome:—What is it that waits wi' its mouth open the whole night in your room for your bones in the morning? Ans., Your shoes.

The following verbal quibble is confusing enough when first heard:—Whity looked out of whity, and saw whity in whity, and sent whity to turn whity out of whity. The explanation is that a white woman looked out of her white night-dress and saw a white cow among the white corn, and sent a white dog to turn it out.

London brig appears in one of Mr Corrie's riddles; it also appears in the following:—

As I gaed owre London brig,
I let a wee thing fa';
The haill folk in London town
Couldna gather't a'.

Ans., A pinch of snuff. This reminds us of the Scriptural expression of "water spilt upon the ground which cannot be gathered up again."

Mouthed like a mill-door,
Lugged like a cat ;
Though you guess till noorday,
Ye'll no guess that.

Ans., Potato pot.

The following riddle has a very wide range :—

Come a riddle, come a riddle,
Come a rot, tot, tot ;
A wee wee man wi' a red red coat,
A staff in his hand and a stone in his throat.

Ans., A cherry.

The following I first heard in Annandale :—What is it that is very much used and very little thought of ? Ans., A dish-clout.

I used to feel rather melancholy at the following narrative, sung in a low, monotonous tone.

No a beast in a' the glen
Laid an egg like Picken's hen ;
Some witch wife we dinna ken
Sent a whitterock frae its den,
Sooked the blood o' Picken's hen.
Picken's hen's cauld and dead,
Lying on the midden head.

As I grew older I was warned away from straying in woods by the description of a hobgoblin. Folk-lorists are endeavouring to shew that Shakespeare's "Caliban" was suggested by no books of travel, but by the legends current about the men of the woods and caves, who existed in Warwickshire in the dim dawn of history. I am sorry that I retain only four lines descriptive of my terror, but they are graphic enough :—

And every hair upon his head
Is like a heather cow ;
And every louse that's looking oot
Is like a bruckit yow (ewe).

The following rhyme was given in autograph by Thomas Carlyle to a friend, and has been published in *Notes and Queries* It is dated Chelsea, February, 1870.

Simon Brodie had a cow
He lost his cow and couldna find her ;

When he had done what man could do,
The cow came home and her tail behind her.

Mr Carlyle also gives his reminiscence of an old Scotch song given at the same date.

Young Jockey was a piper's son,
And fell in love when he was young,
But a' the tunes he learned to play
Was over the hills and far away.
And its over the hills and far away,
The wind has blown my plaid away.

The Dumfriesshire magpie gets more lines than usual:—

One's sorrow, two's mirth,
Three's a wedding, four's a birth,
Five's a funeral, six is snaw,
Seven draws the dead awa'.

When boys saw one they used to spit hastily three times to spit away sorrow. In *English Folk Lore*, by Thiselton Dyer, other three variants are given, but not the one above.

The children's Hogmanay rhyme in Dumfriesshire is more polite than its Renfrewshire version.

Hogmanay, troll lol lay,
Gie's a piece o' pancake
And let us win away;
We neither came to your door
To beg nor to borrow,
But we came to your door
To sing away sorrow.
Get up gudewife and shake your feathers,
Dinna think that we are beggars,
But boys and girls come out to play,
And to seek our Hogmanay.

There is a children's game beginning with a rhyme. The rhymster touches alternately two boys, beginning:—

As I gaed up the apple tree,
A' the apples fell on me.

And ending with the lines:—

Bake a pudding, bake a pie,
Stand you there out bye.

The last touched stands aside until only one remains, who is obliged to bend with his head against the gable, blindfolded. The first boy puts his hand on the back of the one blindfolded. The rhymster puts his hand uppermost and asks "where will this poor fellow go?" So the blindfolded boy sends half a dozen or more to different places all within easy distance. Then he and the rhymster clap hands, and the fun is to see all the boys running back to the gable. The one who comes in last has to submit to be blindfolded in turn.

Another rhyme runs thus. The girl or boy points to one and says:—

Hey Willy Wyn, and ho Willy Wynn,
This night I must go home;
Better alight and stop a night,
And I'll choose you some pretty one.
He replies—Who will that be
If I abide with thee?
She answers—The fairest and the rarest
In a' the country side.

The fun consists in suggesting some one likely to be obnoxious to the aforesaid Willy Wynn.

This rhyme was dinned into the ears of poor girls who were too proud:—

Lady, lady, landless,
Footless and handless.

Those who were proud and greedy got a wigging from the following rhyme:—

Prood skyte of Aberdeen,
Sell't its mither for a preen,
Sell't its father for a plack.
Whatna proud skyte's that?

The following is an invocation to rain and sleet:—

Rain, rain, rattlestanes,
Don't rain on me;
Rain on Johnny Groat's house,
Far ayont the sea.

Another one comes nearer midsummer:—

Sunny shower, sunny shower,
You'll no last half-an-hour.

This being St. Valentine's Day I give the rhyme I best recollect concerning it.

The rose is red, the violet's blue,
The lily's sweet, and so are you,
And so is he who sent you this,
And when we meet we'll have a kiss.

The following is the full text of a rhyme used for the purpose of diverting children in the nursery. It was obtained by a friend of mine from his grandmother, who resided in Dumbartonshire. She had learned it in her childhood, about 1795 to 1806. The gentleman who gave it to me set it to music, and it was sung at a children's concert in Aberdeen. I have only heard part of it in Dumfriesshire. It is worthy of "Alice in Wonderland."

As I gaed up the Brandy hill,
I met my father wi' gude will,
He had jewels, he had rings,
He had monie braw things,
He had a hammer wanting nails,
He had a cat wi' ten tails.

Up Jock, doon Tam,
Blaw the bellows, old man.
Peter cam' to Paul's door
Playing on a fife.
Can ye shape a Hielandman
Out an auld wife?
He rummelt her, he tummelt her,
He gied her sic a blow,
That out cam' the Hielandman,
Crying, trot, show!

Man wi' the skinny coat
Help me owre the ferry boat;
The ferry boat's owre dear,
Ten pounds every year.

I've a cherry, I've a chesz,
I've a bonnie blue glass;
I've a coo among the corn,
Haud Willie Blackthorn.

Willie Blackthorn had a coo,
Its name was Killiecrankie,
It fell owre an auld dyke
And broke its neevie nankie.

Ink, pink, sma' drink,
Het yill and brandy ;
Scud aboot the hay-stack
And you'll get sugar-candy.

The man with the skinny coat in charge of the ferry-boat is worth taking a note of. Will he be very much prehistoric ?

In conclusion, we have a few puzzles got from transferring the accent, of which the best and widest known is the one :—

In firtaris,
In oaknonis,
In mudeels is,
In claynone is.

The only new one I have runs thus :—

Leg-â-mouton,
Half-â-gous,
Pastry-ven-î-son.

Leg of mutton, half a goose, pastry venison.

II.—*Remarks on some of the Place Names of the Stewartry.* By Mr FRED. R. COLES, Cor. Mem. S.A., Edinburgh.

The proper study of the place names of any one county might well occupy the leisure hours of a lengthy life. Like all other sciences dependent upon the confluence of human interests with the practical as well as the poetic phases of nature, this study opens the doors of an almost unending vista, and one word alone may become the "open sesame" to an investigation well nigh as limitless as it is fascinating. A single name, a phrase, an epithet of colour, a mere syllable of description, may carry the philologist in a twinkling, thousands of miles away—the slight phonetic change, *e.g.*, of the letter M to V in such a place name as Milleur conveys us at once from the Highlands of Scotland to the heart of our Indian Empire, where Vellore has the same meaning, "grey hill," Gael. *meall odhar.**

Comparisons of this sort, however tempting to follow up and multiply, are not the purpose or the goal at which my efforts are in this communication directed. The risk of correct interpretation

* Johnstone's *Place Names of Scotland.*

is too hazardous, the results too meagre, for properly satisfying the spirit of true enquiry. Until the place names of each parish are diligently collated, set apart in groups, tabulated, and compared with each other, it is useless to frame theories upon racial distribution, or even upon the various degrees of rarity revealed by any one or any two or three special groups of words. It is with the intention of attempting to lay a few stones for the foundation of a correct study of our local place names that this necessarily brief paper is laid before the Society.

The first factor of importance, it seems to me, is to gain a general idea of the number of place names. It may appear somewhat startling to hear that, from the six-inch ordnance maps alone, it is possible to tabulate over 3300 names. Not different names, pray observe, but, to put it in another light, there are in the Stewartry, at the very least, three thousand spots, mountain tops, hills, ravines, glens, cleuchs, corries, hollows, heights, haughs, valleys, banks, rocks, streams, burns, lochs, bays, promontories, farm lands and dwellings, &c., &c., each of which has a name. This estimate is well within the mark, for in it are not included many names, specially interesting too, with which the kindness of one or two antiquarian friends has supplied me, nor does it include some names which have only recently been made available through the publication of the ordnance maps on the 25-inch scale. And further, it must be actually a less estimate when we recollect that scores of names of fields and small crofts, now only preserved on private estate maps, are not comprised in this sum total. This number is sub-divided thus :—

Class I.—*Gaelic Names*, inclusive of the two sub-classes, viz. :—

(*a*) Names of natural features...	...	785	1312
(*b*) ,, buildings...	...	527	

Class II.—*Non-Gaelic Names* :—

(*a*) Names of natural features ...	...	969	1506
(*b*) ,, buildings...	...	537	

This we further sub-divide into the following sub-classes :—

(*c*) Gaelic hill names ...	...	642	785
(*d*) ,, stream names	...	143	
(*e*) Non-Gaelic hill names	...	769	969
(*f*) ,, stream names ...	...	200	

A third class comprises a very interesting set of names.

Class III.—*Hybrids.*—This again is composed of two sub-classes :—

(*g*) Hybrids, pure and simple	122	}	222
(*h*) ,, complex and irregular ...	100	}	

Class IV.—*Unclassifiables.*—This name is applicable to several place names which are, on the face of them, apparently beyond the pale of any one of the above sub-classes, names which do not seem accountable for upon any method of linguistic cross-breeding, so to speak.

Class V.—*Uniques.*—A somewhat arbitrary nomenclature, perhaps ; the term must be understood, of course, as unique in the locality. This class comprises mostly hill names. They number only 25, and are not included in any of the other groups.

By this severely unromantic method of sub-dividing, halving, quartering, and, if necessary, decimating our groups, it is possible to arrive at a stratum of fact, of a whole world of facts, indeed, which, so far from being the prosaic atoms we commonly suppose, are intrinsically brimful of interest. At the outset of this enquiry, for instance, it is not unimportant to notice that the non-Gaelic names outnumber the Gaelic by over 200. I have heard the exact reverse stated, without any figures to prove the assertion. A second very striking result is the small number of stream names that exists compared with the number of hill names, about one to four. Unthinkingly, one might be led to infer from this that, in comparison with mountains and heights of all kinds, the Stewartry was poor in that most beautiful and divine touch of beauty, water. This is not the case, as we all know. The secret is explained by the very simple fact, that names of farms or farm-lands are repeatedly given to the nearest burn or river, while the hill names are their own, *i.e.*, the names of farms are treated of in their proper place. Were they added to the specific names of the burns and other waters, their total might rival that of the hills themselves.

Coming more to details, we are met, next, by an array of Gaelic affixes or suffixes which are all-important. Of these the commonest are *Auchen*, *Bar*, *Ben*, *Craig*, *Dal*, *Drum*, *Dun*, *Knock*, *Mull*, *Tor*, and the word *Hill* following a Gaelic name. In the

adjoining table will be found the order in which, according to frequency, these prefixes occur :—

Knock	120 times.	Ben	34 times.
Hill	108 ,,	Dun	27 ,,
Craig	107 ,,	Mul	25 ,,
Drum	104 ,,	Auchen	21 ,,
Bar	66 ,,	Tor	17 ,,
	Dal 12 times.		

In the names descriptive of hills non-Gaelic in origin the affixes or suffixes are *Brae*, *Clint*, *Craig*, *Drum*, *Gairy*, *Hill*, *Knowe*, *Nick*, and *Rig*. Of these, it would demand small shrewdness to guess that the epithet *Hill* is by far the most frequent ; but I think even a student of hills in hilly Scotland will be surprised to hear that there are actually 480 heights called hills in this one district. Summarised, this group stands thus :—

Hill	480 times.	Brae	20 times.
Knowe	116 ,,	Nick	12 ,,
Craig	63 ,,	Clint	6 ,,
Rig	62 ,,	Drum and Gairy, 5 times each.	

For our present purpose it should be enough to close our classification here, and look a little more closely into the seemingly labyrinthine contours and trends of our hills alone.

As one would expect, the prefix *Ben* is given to only the highest summits ; with the one notable exception of *The Merrick*, which, being the highest hill south of the Firth of Forth, yet is not dignified by the specific title. Some of the other Bens properly so named are Benbrack, Bennan, Beninner, Benyellary, Benguinea, Ben-nie-loan, Ben-neeve, Benfadyeon, Ben-meal, Benghie, Benower, Benjarg—all of them in the really highland parts of Carsphairn, Minnigaff, Dalry, Kells, and Girthon. The middle districts are void of Bens on the whole ; but Ben Gray, in Twynholm, and Ben Gairn and Ben Tuther, in Rerwick, are examples much farther southwards. Ben Ian and Meikle and Little Bennan occur in Anwoth.

Minnigaff is the home of the hills whose prefix-epithet is *meal*, or some variant of it ; as *e.g.*, Millmore, Milldown, Meaul, Mulgarvie, Mullachjeny. Kells supplies four :—Milldown, Millfire, Millgea, Millminnoch ; Multaggart occurs in Kirkmabreck ; Milldown and Mullabeg in Irongray ; Mull of Ross in Borgue ;

while two Mullochs and two Moyles in the extreme S. and S.E. prove that the distribution of this epithet is wide and extensive.

Craig is a pure, strong Highland epithet; its occurrence, therefore, very frequently among the wildest of our mountain landscapes is what one would naturally expect. In Carsphairn alone there are fourteen:—Craighorn, Craigfad, Craigdunool, Craigtarson, Craignane, Craig-en-colon, Craig Stewart, Craig-crocket, Craig-en-geary, Craig-en-rine, Craig-en-gillan, Craig-wallie, Craigwhan, and Craiglingal. Minnigaff makes a good show with twelve:—Craig-en-keelie, Craigjig, Craig o' Bellew, Craig-en-kald, Craig-en-garroch, Craig-cheskie, Craig-tarson, Craig-na-craddoch, Craignine, Craig-naw, Craiglee, Craighit. But Kells —not so northerly a district as the bulk of the two parishes above-named—possesses seventeen:—Craignelder, Craig-gairy, Craigrine, Craig-maharb, Craigknuckle, Craigmichael, Craiggubble, Craig-broch, Craigloft, Craigcrun, Craigdoon, Craigenlees, Craigenben, Craigen-altie, Craigen-ower, Craigenshinnie, Craigend, the last of these being most probably corruptions of the Gaelic diminutive *creagan*, "a little crag." Dalry has Craigencorr, Craigbane, Craig-lonr; Girthon, Craigshinging, Craig Ronald, Craigherron, Craig-lowrie, Craigbrack, Craigtype; Balmaclellan, Craignaw, Craigbonny, Craig-a-learie, Craigengower; Kirkmabreck Craigmule (possibly a variant of *mul* through *moyle*) and Craigenboy; in Rerwick, Craig-raploch, Craigrange, Craigrow, and the curious name Craigmullen; in Balmaghie we find Craigelwhan, Craigcroft, and Craiganeltie; in Urr, Craigley, Craigmath, Craigallan, and Craigenfinnie; Borgue gives us two, the specific Craig and Craighar; Kirkcudbright has Craigens; Kirkpatrick-Durham has Craigengillen and Craigelwhan; Parton, Craigmore; Colvend has Craigbrex, Craigen-ower, Craig-duff, Craigroan; in Skyeburn Bay, in Anwoth, is a rock named Craiggibboch, with a companion rock in Fleet Bay called Craig-n'esket; there is another Craignine in Twynholm, and another Craigmore in Lochrutton. Craig, Craigend, and Craigrocktall occur in the extreme S.E., in Newabbey.

The distribution of the Gaelic *Knock* is very much more general. It appears to radiate from Balmaclellan as a centre, where it occurs 13 times, in nearly all directions; but while Kells has 12 Knocks, Carsphairn and Minnigaff have only 4 each; Balmaghie has 7; Kirkmabreck, in the far west, has 9; Girthon, Parton, and Kirkpatrick-Durham 6 each; Dalry, Borgue, and

Rerwick 5 each; Crossmichael and Kirkcudbright each 4; Irongray and Tongland each 2; Troqueer, 2; Kelton, 2; Colvend, 2; Urr and Anwoth, each 1, the last being Knock-tinkle.

Our next Gaelic prefix, *Drum*, is interesting from its very capricious dispersion through the district. If *Knock* is a rounded hill, distinctly pointed, like a gigantic *knuckle* in fact, then *Drum* should be the appellation bestowed upon a long ridgy height. It is not so specifically a Highland feature as many of the other hill forms. Agreeably to this, we find it occurring only eight times throughout the whole of the large and varied parish of Minnigaff, only five times in Kells and Girthon, and only twice in Carsphairn. In Dalry it occurs eleven times, and in Balmaclellan, the adjoining parish, reaches its highest total of twelve. In these two localities you may any day convince yourself of the accuracy of this nomenclature. The central and southern portion of the county have extremely few Drums, seven parishes possessing only 1 each, six others only 2 each, four have 3 each, two have 4 each, one (Balmaghie) has 5; and Parton, which adjoins Dalry and Balmaclellan, has 8. This leaves Kelton and Terregles with none at all.

The important prefix, *Dun* (pronounced *Dóun* or nearly so), I have found at 27 different localities, some of which are certainly the sites of forts, others as certainly not; thus proving that the epithet was applied to a somewhat level-topped prominent hill or hillock, as such, perhaps oftener than to heights upon which any fortification may now be traced. In Carsphairn there are Dunbeg, Dundeugh, two Dunmores, and Dunbannoch. In Minnigaff there is but Dunnance (corruption of the Gaelic diminutive) and the doubtful form Denniemulk; in Kells, Dunveoch; in Girthon, Dunharberry, Doon o' Culreoch, and, possibly, Dendow, said to be an old form of Disdow; Balmaclellan has Dunower; in sea-washed Rerwick we all know Dundrennan and its majestic Abbey ruins, but not all of us have set foot on the, in its way, equally impressive stone fort on Dungarry, Galloway's Thermopylæ, as I have named it elsewhere. Balmaghie yields two, Duneskit and Dunnance, the latter a fortified site; Dunjarg and Dunmuir, in Crossmichael, have both been forts, and superbly situated they were; so also was Dunguile in Kelton; Dunrod occurs in Borgue, the site of one of the oldest twelfth or thirteenth century churches dependent upon the Abbey of Holyrood house; and it is found

also in Kirkcudbright, not in association with a church site, but with one of those nearly rectangular forts commonly supposed to be Roman. In Southwick are Dunmuck, Doonend (probably a corruption again of the Gaelic diminutive), and Dunjimpon; the latter found also in Buittle; in Twynholm, Din Hill and Doon Hill.

Without going specially into the local distribution of the prefixes *Auchen* and *Dal*, which are not specifically hill epithets, let us look at some of the names, Gaelic and other than Gaelic, which stud the maps with their odd-looking lettering, and surprise or amuse the ear when one hears them pronounced. Many hybrids offer good examples of this peculiarity. For instance, Shouther o' Mullbane, Tormoidknowe, Wee Meaul, Alwhannie Knowes, Hags o' Poljargen, are hill epithets in Carsphairn, both quaint and sonorous. Fangs o' Merrick, Lamachan Scaur, Nick o' the Bushy, Wheel, Clachaneasy, Borganferrach, Troston, Scars o' Gaharn, Closing, Clashdookie, Nick o' Slanyvenach, Magempsey —this formidable-sounding array represents but a few picked at random out of my lists for the wild highland parish of Minnigaff, names, for the most part, best left alone, so far as interpretation is concerned. To one just mentioned, however, I am tempted to advert for a moment—Clachaneasy. This is usually supposed to be the Gaelic *Clachan Josa*, in a corrupt form, and to mean "the hamlet, or church, of Jesus." To give colour to this, one would expect to find the ruins of a primitive chapel near; but not even the site of such is, traditionally or otherwise, vouchsafed us. Besides, *easy* is a most unwarrantable mispronunciation of *Iosa*. The true interpretation, while destroying the sentiment of association with an early Christian settlement here, is, at anyrate, reasonable. Close by the bridge, near Clachaneasy, is a small stream, like many another stream hereabouts, of turbulent temper and changeable. Its name is, nowadays, Essie or Essy. What can be simpler than to trace the "easy" of the place name to the Gaelic *eassie*, or cascade, or a stream of cascades? I am glad to find that my rendering of this name is in agreement with that suggested by more than one Gaelic scholar far more competent to pronounce an opinion.

Girthon—to resume our main line of illustration—supplies us with the very strange names, Syllodioch and Garniemire; in Balmaclellan, high up among the hills, 1150 ft. above sea level, is

the puzzling name Schoolknowe; equally puzzling is College Glen and College Hill, nearly 1200 ft. above sea level, in Dalry. Manifestly these words are not our modern words "school" and "college," any more than is the latter found in College Lynn in Carsphairn. This last is a very fine linn indeed; and, when in spate, the river Ken must come roaring and routing through this rocky channel in magnificent style. Now there is the Gaelic adjective, "*coillaidheash*," which, I suggest with the utmost diffidence, might have been the original of the ephitet pronounced by the Lowland shepherd as something like "college," and which the English surveyor wrote down "college" as being the nearest approach he could make phonetically.

As hinted above, it is impossible in the present paper to do more than skirt the fringes of a vast subject. The tabulation of even the Gaelic hill names alone would occupy more space than might be expected. A few notes upon the names of hills that are not Gaelic may fitly close these remarks. Take the generic term "Hill" to begin with. Out of the total of 480 localities thus named, the district now called Balmaclellan yields 80 of itself. This sub-divided gives 15 Whitehills, 5 Millhills, Gowkthorn Hill (2), Redhill (2), Crof Hill (2), Belt Hill (2), Bar Hill (2), Brown, Grey, Blue, Green, and Roan Hill (1 of each), a Low Hill and a High Hill, an Abbey Hill, a Court Hill, a Sheil Hill, a House Hill, a Well Hill, and a Step Hill, a Dam Hill, a Moat Hill, an Orchard Hill, and a Byre Hill, Crooks Hill, Spring Hill, Trip Hill, Bere Hill, Clay Hill, and Burntland Hill, a Tod Hill, and a Ewe Hill, a Stey Hill, and a Shaw Hill, Ree Hill, Blacknest Hill, a Halfmark Hill, and a Dear Hill, and others having the specific qualifications of Souter's, David's, Thornie, Seg, Hog, Drum, Gibbs', Mid, Scar, Peat, Fairy, Loch, and Cairney. It is doubtful where Blowplain Hill should be ranked, probably as a much inverted Anglicised form of some lost Gaelic name. I may remark, in passing, that Cairney Hill, Thorny Hill, Shiel Hill, and Hill with some colour-epithet are much the most frequent appellations. Tippet Hill, Gibbon (which is the name of a rock near Castle Muir), Dead Horse (part of the ground at the foot of Netherlaw Glen), Farhills, Flat Hill, and two heights called Old Man are very peculiar names found in Rerwick. Summer Hill occurs in Balmaghie, and also Butter Lump, which, however, has nothing to do with dairy produce, but probably indicates a spot near which

the bittern used to keep its abode. Besides many hills sacred to trees and bushes, Crossmichael, very strikingly hilly as it is, out of a total of 30 names has these—Broad Bonnet, Glede Hill, Gibbet Hill, Kiln Hill, and Smithy Hill. In the parish of Urr are the following unusual names—Common Hill, Cock'trice Hill, Shot Hill, Fell Hill, Sour Hill, Corse Hill, and Holehouse Hill. In Borgue, besides Doors Hill, are Fox-cover Hill and Harking Hill. One is tempted to suppose these two latter closely connected, but any information on this head is not sufficient to confirm the assumption. One wonders how there comes to be an Angel Hill (near Kirkcudbright) and an Angel Chapel many miles distant in Irongray, where certain stony remains pass for the site of some such building. Herries' Slaughter is the terrific name of a height near the county town also, and Silver Hill belongs to the same locality. Kirkpatrick-Durham has 29 hills, of which the uncommonest are Cleuch Hill, Tan Hill, Fleckit Hill, Butt Hill, Longberrie Hill, Gowkcairn Hill, Fair Hill, and Brownie Hill.

Out of a total of 36 in Parton, White Hill occurs 6 times; and Cowcloot, Roundrigg, Hurkledown, Box, Crow, and Rumples are specific names enough to show that there may yet be found other and stranger sounding names here. One such is to be found in the New Statistical Account (vol. iv., p. 283). It is Cruckie Height, a hill west of Mochrum Fell. Thornkip, as a special name, is peculiar. It belongs to a hill in Colvend, where also may be noted Ryes Hill, Goat Hill, Hare Hill, Bow Hill, and Castle Hill. Anwoth, with its almost pure Scandinavian name, is not specially rich in names of Hills. Trusty's Hill offers the most captivating bait to the unwary philologist, and you will find the results of painful research about sundry early Pictish kings, Drush or Drostan, or Trostan, recorded here and there. I am ready to yield any little allegiance I ever paid to this theory, because I have it on good authority that in a cottage between Cardoness Castle and the Fort on the Hill not so many years ago, lived a man of the name of Trusty. From the frequency of his solitary pilgrimages to the hill, that locality became in the course of years among the country folk "Trusty's Hill." An explanation equally simple and, if you will, unromantic can be given of the name Castramont, on the Girthon side of the river Fleet. As, however, discussions of this nature necessarily open

up the whole subject of the etymology of our place names in general, we must defer it for the present.

In Twynholm is a name which, like many others, offers the ingenious word hunter a choice of interpretations. A little to the east of Miefield (mis-spelt Mayfield on the maps) there rises a fine rocky hill, with a bold cliffy western frontage; its name is Dow Craig Hill. Were this pure Gaelic one would expect it to be Craigdhu, just as we find it among the sterner hills in Kells, the following epithet of "hill" not being at all uncommon. Craigdhu would, of course, mean Black Craig, but is the name appropriate? May the whole name not be simply broad Scots, Doo Craig Hill—a haunt of the wild pigeon?

I cannot in this connection omit quoting the Queenshill of Tongland, usually said to be so named from the fact of Queen Mary having rested thereon during that galloping ride from Langside. This story, firmly believed in in my boyhood, has yielded to reason and observation, and the route, by which the ill-fated Queen of Scots really reached Dundrennan, has long seemed to me to have been through Irongray and by the Castle of Corra, a line of travelling very much more direct and swift. How account for the name then? That may be more difficult. It is always, except in novels, harder to reconstruct than to destroy. We must bear in mind, however, that this part of Tongland is rather peculiarly rich in old ecclesiastical names, and others of special interest. Kirkconnel Hood, up, on the side of Tarff water, near Barstobric's N.W. base, are the Bishop's Rig and Bishop's Moss, close to them is Thorold's Knowe, and within a stone's throw is a spring called the Queen's Well. If, as seems probable, this church, dedicated to Saint Connel, or Connall, be really one of the few very ancient churches whose record remains in the Scottish Lowlands, may it not be possible that the Well and the Hill were named in memory of Queen Margaret, from her frequent pilgrimages through the district, to that most venerable church of all, at Whithorn? This may appear to be a point upon which proof is unobtainable. I offer the explanation with no assumption of authority, merely as being a more reasonable one than that commonly received.

There is in Troqueer a place called Suffolk Hill. I do not pretend to explain it. Perhaps, like the latter half of the parish name, Kirkpatrick-Durham, it is not in reality the name of an

English county, but a phonetic corruption of some Gaelic word.

Terregles, small district and possessing few names, gives us two extremely interesting hill epithets—Beacon Hill and Belton Hill. The latter, very probably, dates back to the days when May-day festivals and sun-worship were solemn rites and part and parcel of the religion of our forefathers to an extent hardly credible to us nowadays; and, on the broad summit of the height which forms so conspicuous a feature in the landscape of the extreme East Stewartry, no doubt, in "the good old days," when English raids and Highland ravages were frequent, a far-reaching blaze of red flame flashed the signal down the Nith and up into the lonely glens of Cairn from the Beacon Hill.

II.—*Food Plants. Flowerless Plants.* By Mr PETER GRAY.

As everyone knows, the bulk of our vegetable food is derived from the higher or cotyledonous plants; but the more lowly or acotyledonous genera also furnish more or less nutritive substances, which in some countries are in constant use, and in others utilized in times of dearth as substitutes for the more valuable products of the dicotyledonous and monocotyledonous tribes.

To begin with the highest grade of flowerless plants, ferns are used by several races, either commonly or in times of scarcity, as food. In several species ferns have farinaceous rhizomes, or underground stems, which are roasted or boiled, being usually first steeped to get rid of the bitter and astringent principle they contain. Of these the chief are species of pteris, diplazium, nephrodium, and marrattia. When Cook visited New Zealand, the root of a species of fern was in common use, and that and fish and human flesh constituted the main articles of diet in the islands; for the moa and other large ostrich-like birds had been long exterminated, and there were no quadrupeds in the country save a small species of dog kept as a pet, and another about the size of, and allied to, the rat.

Neither the fern allies—mosses, hepaticæ, nor characeæ—are utilised as food; but many of the lichens supply wholesome nutriment both to man and beast. The genus gyrophora saved the life of our townsman, Sir John Richardson, when engaged in Arctic exploration, at a time when the travellers were reduced to feed

upon their boots and any scraps of leather they could find; and the Lapps would be unable to keep their reindeer, were it not for the abundance of cladonia rangiferina, or reindeer moss, on which these animals chiefly sustain themselves. Iceland moss (cetraria islandica) is a nutritious food for man, and much valued as a mild mucilaginous tonic in catarrh, consumption, and other diseases. Two species of Lecanora form important articles of food in Persia, Armenia, and the adjacent countries. They appear in some seasons in such enormous quantities that in certain districts they cover the ground to the depth of several inches, and the natives believe they fall from heaven. In 1829, during the war between Russia and Persia, there was a great famine in Oroomiah, on the south-west of the Caspian; and one day, during a violent wind, the whole face of the country was covered with one of these lichens, which fell in showers. In 1846, in the Russian province of Wilna, the ground was covered several inches deep by a fall of one of them. Other similar falls have been recorded. It has been attempted to identify these lichens with the manna on which the Israelites were fed during their wanderings in the Arabian desert. They probably grow with a very slight attachment, or none, to the ground, and, driven by the wind, fall like rain. One of the species is also eaten by the Kirghiz Tartars under the name of earth bread, and another both by men and animals in Algeria. But of all cryptogamous plants the most available as food are the fungi. The flesh of fungi resembles in many respects that of animals, and in some cases it is similarly flavoured. During the civil war in the United States, when food, and especially meat, was scarce and dear, an American mycologist says their value was much appreciated by those able to discriminate them There are at least from 40 to 50 species in this country which are harmless, but many of the others are virulent poisons; so that nobody should meddle with them unless he is able with certainty to distinguish the wholesome from the poisonous. What adds to the danger is that the symptoms do not appear until the venom has been absorbed into the system, when remedies are too late. In all cases it is well to infuse the mushrooms, even those commonly used, in a strong brine of vinegar and salt before cooking; it is possibly owing to this method of preparation as much as to difference of soil and climate that the Russians and other foreigners are able to eat species that are deadly poisons with us. Agaricus campestris is

much used in this country in the manufacture of ketchup. Some large makers are said not to be over-careful in the species they use; and that accidents do not oftener happen in consequence may be owing to the salt used in the manufacture. This mushroom, the only one most people in this country will use, is, very curiously, altogether prohibited in the Roman market. The chanterelli (*Cantharellus cibarius*), a beautiful fungus, is eaten and much esteemed in all countries where it is found, England alone excepted. It is of this fungus that a German mycologist observes that "not only did it never do anyone any harm, but that it might even restore the dead." There is a broad-sheet published containing excellent coloured representations of all the British edible fungi, but I would again strongly advise everyone, save experts, to give the fungi, reputedly wholesome or not, a wide berth, some peculiarly noxious ones closely resembling others that are wholesome. One remarkable fungus (Cytharia Darwinii), of which there is a long notice in Charles Darwin's *Voyage of the Beagle*, is very abundant in Terra del Fuego, supplying the Fuegians with their only bread. Another of the same genus is used in Chili; and *Mylitta australis*, the Australian "native bread," is largely used by the natives of Australia. Other closely-allied species are also used in China both as food and medicine.

Many of the algæ are eaten. Alavia esculenta, bladder, or perhaps, more correctly, balder-locks, which Berkley considers the best of all esculent algæ when eaten raw, is employed for food in Scotland, Ireland, Iceland, and other northern countries. Carrageen, or Irish moss, is, or ought to be, derived from Chondrus crispus. It may interest the ladies to know that bandoline, used for stiffening the hair, is commonly prepared from carrageen. Durvillea utilis is much used for food by the poorer inhabitants of the western coast of South America. The fuci, especially vesiculosus, the bladder wrack, is employed in feeding horses and cattle in winter in certain Scottish islands. Gelidium correum, a British seaweed, is a favourite article of food in Japan. The gracillarias are similarly utilized in many parts. The young shoots of laminaria are eaten in Scotland under the name of tangle. Rhoderrenia palmata (dulse) and laurantia pinnah fida (pepper dulse) and ulva riphyra are also used with us, but more, perhaps, as a relish than as food. Many other algæ are eaten all over the world. The edible birds' nests, so highly valued as food in China

and Japan, probably owe their properties in part to certain species of algæ. Besides, as nourishment, algæ are very beneficial in many complaints owing to the iodine they contain.

IV.—*Notes on the Ancient Parish Church of St. John the Baptist, Dalry, Kirkcudbrightshire.*

By Mr William Galloway, Corr. Mem. S.A. Scot.

It was on the 19th of October last that I made my first acquaintance with the charming district of the Glenkens, of whose picturesque beauties I had previously heard so much. There had been a sharp frost over-night, and the whole country was covered with a thick coat of rime, only too faithfully simulating the first snows of winter. As the sun gained power, this silvery veil disappeared, and the day turned out very good indeed, the mellowing tints of autumn lending a pleasing variety to the ever-changing scene.

The immediate object of my quest was the ancient Parish Church of St. John the Baptist, at Dalry. Knowing it only by name, I was in happy ignorance of what I might expect, yet cherishing the idea that in such an out-of-the-way locality, there was a pleasing hope of at least some mouldering walls, choked possibly with nettles and rank undergrowth, yet presenting sufficient indications to determine style and period.

Arrived at my destination, one glance at the churchyard dispelled all these illusions. Occupying the only spot where the old church could have been, on a knoll surmounting the brawling Ken, sat a spruce modern building, in all its surroundings so trim and well kept as to show at once that with one exception all traces of its old predecessor had been carefully removed or buried out of sight. Close to it, yet detached, on a green brae of its own, wreathed with trailing wisps of ivy, unkempt, yet quaint and curious, with crow-stepped gable, large antiquely-grilled window and panelled coat of arms, stood the one exception noted—the Kenmure burial aisle, and, time being limited, to it I at once directed attention.

If the present Parish Church has well-nigh obliterated every trace of its predecessor, it has, at least, by exigency of a very restricted site, retained its orientation, in its main length standing due east and west, and it thus became at once evident that the

Kenmure burial aisle had originally formed a southern annex or transept to the chancel of the old Church of St. John. In its present state it is structurally quite distinct from the parish church, and separated from it by a narrow passage, gained chiefly by cutting off its own north-western angle. The aisle measures externally 22 feet by 18 feet 7 inches, and internally 17 feet by 14 feet 2 inches. The south gable is 2 feet 8 inches in thickness, and the remaining walls about 2 feet 3 inches. The connection between the Church of St. John and the aisle has been by a plain rubble archway, without dressings or ornament of any kind. This archway is 8 feet high and 4 feet 8 or 9 inches to the spring, so that, although slightly pointed, it is practically a semi-circle, and is now entirely closed by a 20-inch rubble blocking. Except at one side, where a flag has been removed, the paved ingoing is still intact. Apart from this communication with the old Church, which would no doubt be used on occasion of interments, there is also an external door in the west wall 2 feet 8 inches in width, with freestone rybats and lintel, all very carefully hewn with a plain quarter round on the rybat head. The only window is that in the centre of the south gable, 6 feet in height by 3 feet 8 inches in width, all hewn in the same careful fashion as the west doorway. This window is closed by a massive antique grille, which must, to all appearance, have been built in with the masonry at the first, and there is a tradition that it is three hundred years old, which would, of course, carry the aisle back to the 16th century. Above the window there is a very simply moulded panel, containing a shield divided in pale, on the dexter side carrying the three boars' heads erased of the Gordons, and on the sinister side the Scottish lion rampant, but without the tressure. The gable is crow stepped with plain, bold skewputs, and a finial of Jacobean design atop. It is also quoined in freestone, and has been in every way very carefully and substantially built. The walls, which are 10 feet high, have no other openings save those mentioned, but in the south-east angle there is an aumbry, 1 foot 7 inches wide, 1 foot 3 inches deep, 1 foot 9 inches high, and 3 feet 6 inches from the sill to the floor. The original wall-head coursing is all gone, but I found a small portion of it lying inside, 4 inches thick, with a simple cyma-recta moulding exactly similar to that on the old burial enclosures in the lower part of the churchyard. The aisle, which had been probably getting out of

repair and unroofed, has been very efficiently protected by broad copestones, which have also been carried up the back of the skews. At the north-east angle, externally, a most interesting feature occurs in the remains of one side of a window, undoubtedly pertaining to the old church, and to which the aisle had originally been built as closely as possible. There are three freestone rybats still remaining, with a bold splay externally, then a glass groove with check, and splayed ingoing internally. This shows clearly that the Church of St. John had extended still further to the east, although from the rapid rise of the ground in that direction the extension could not have been great. The window, of which a small portion thus fortunately remains, must have lighted the chancel, and if the Kenmure burial aisle did not open directly from the chancel it must have been very close to it. As previously mentioned, a considerable slice having been taken of the north-west angle to form the passage, all information as to the connection at this point between the aisle and the old church is necessarily lost. It is, however, very interesting to know that so recently as 1880, in the ground immediately to the west of the aisle, foundations of the old Church were encountered. No interments had ever been made in this spot, but in the above year, a burial having taken place, the ground was trenched, and a monument erected, the old found being broken up, and cart-loads of rubble stones removed. So strong, indeed, was the building that it was almost necessary to employ gunpowder to break it up. Most unfortunate operations certainly for archæology, seeing that these foundations ought rather to have been brought up to the surface, and so permanently commemorated than destroyed, and this should certainly be done in the intermediate spaces between the burial aisle and the projection of the church at the south-west corner. This clearly indicates how the south wall of the old church ran, but beyond this all is uncertainty.

We have already seen that in the three rybats and ingoing of a window at the north-east angle of the Kenmure aisle, there still exists *in situ*, saving the aisle itself, the only extant portion *above ground* of the old Church of St. John. In the form of reused stones, however, the Parish Church itself contains considerable traces of its historic predecessor. At all the salient angles of this building shallow projections in the form of pilasters, 2 feet 3 inches on the face, are carried up to the wall head and there terminate

in pinnacles. On the south front, or that part of the church most in view, like the rest of the hewn work, these are all built in polished red freestone (Locharbriggs, I believe). On the north side, however, to a height of 10 feet, these projections are built of massive blocks of strong grained silurian grit, so extensively used in ancient times in all buildings of any pretensions, civil or ecclesiastical, throughout the province of Galloway. They have all, without exception, been carefully hewn for other purposes than they now serve. One shows a glass groove with the leaden plug for a rivet or stanchion end, still in its place. Others are hewn with six-inch margins, and so in various ways indicate use in a previous building, which there can be no reasonable doubt was just the old Church of St. John, which is thus proven to have been a most substantial structure. Above this ten-foot tier of re-used hewn stone the projecting corners are completed with large blocks of ordinary rubble. These observations were all made at a certain disadvantage, for the true colour and texture of the stones themselves are not to be seen, the entire building being elaborately painted from base to topmost pinnacle a uniform dull grey.

Thus to recount what remains of St. John's Church seems like describing the contents of a stable after the steed has been stolen, and it seems most deplorable that a building to all appearance so strongly built, and so substantial, should, at the bidding of modern exigencies, have been entirely lost to the historic treasures of the country.

Before proceeding further, I may be allowed a few remarks on the coat-armorial carved in the panel on the Kenmure aisle. We found that the shield was divided in pale, with three boars' heads *erazed* on the dexter side, and a lion rampant on the sinister. The first is, of course, the usual Gordon arms, differing only from the earliest arms, as given by Nisbet, in the fact that these are stated to be "A bend *between* three boars' heads, *couped*,"* whereas the charge on the aisle shield agrees rather with Nisbet's second blazon, borne by Alexander Gordon of Penninghame, who succeeded to the honours in 1663, which are simply "Three boars' heads *erazed*," without any reference to a bend, and so exactly describing the Gordon arms on the Aisle shield. A much more

* In his "Peerage" (Edin. 1716) George Crawfurd also gives the Kenmure arms as "Azure, three boars' heads, *Coupé*, Or."

important question, however, is raised by the cognizance borne on the sinister side of the shield, viz., the lion rampant. At first sight it might appear as if this were indicative of a matrimonial alliance with some family whose arms were represented by this charge, and trust I may be excused the following details.

We find in the earlier part of the sixteenth century that Sir John Gordon of Lochinvar married Juliana, youngest daughter of Sir David Home of Wedderburn, fifth of the line, who was killed in action with the English in 1524. The Homes of Wedderburn were cadets of the great house represented by the Earls of Home, whose original arms were a lion rampant, derived, no doubt, from their immediate ancestors, the Earls of Dunbar. From a very early date, however, in the fourteenth century, the Homes were accustomed to quarter their arms with those of various heiresses, with whom they acquired lands, the first being Sir Thomas Home of Home, who, marrying Nicola Pepdie, heiress of Dunglas, impaled her arms with his own as stated by Nisbet.[1] "He built the Collegiate Church of Dunglas, whereon was his arms, which I have seen impaled with his lady's, being three birds called *papingoes*, relative to the name of Pepdie. . . . The arms of Pepdie have since been always marshalled with the arms of Home and the descendants of their family." We accordingly find in the "Armorial de Berry" of date 1450-55, and composed by Gillies de Bouvier, at the request of King Charles VII. of France, "one of the most valuable heraldic manuscripts in existence." The achievement of Home of Dunglas is there shown to be, quarterly, first and fourth, the three papingoes, and, second and third, the lion rampant, precedence thus being given to the arms of the heiress of Dunglas, although it is noted by Mr Stodart that "the seals of Alexander Home (1437), Sir Alexander (1450), and Alexander Lord Home (1486), all have the lion of Home in the first and fourth quarters, and the papingoes of Pepdie in the second and third."[2] In the MS. attributed to Sir David Lindsay, the younger, 1603-5, the Home of Wedderburn arms are given quarterly—first and fourth, the lion rampant; second, the triple shields of Hay; and third, the papingoes of Pepdie. In "Alexander Nisbets Heraldic Plates" (Edinburgh, 1892) we find

1. *System of Heraldry*, vol. i., p. 270.
2. *Scottish Arms*, by R. R. Stodart, vol. i., plate vi. and vol. ii., p. 47.

the Home of Wedderburn arms given—first and fourth, the lion rampant; second, the three papingoes; third, the engrailed cross of the Sinclairs of Polwarth, another heiress. These quarterings, commemorative of lands acquired through various heiresses, are borne by all the branches of the Home or Hume family without distinction from the Earls of Home and Marchmont down through all its numerous cadets. In singular contrast to this unanimous practice, Nisbet himself notes a curious exception, in the person of Nicola Pepdie's own son David, the first of the Wedderburn race who used a seal with the Home lion unaccompanied by his mother's arms, and also his grandson George, who had the same arms carved on the gateway in front of Wedderburn House.

Under these peculiar and apparently discrepant circumstances, I have taken the opportunity of consulting an eminent authority, Mr Andrew Ross, Marchmont Herald, who considers the case quite open to an alternative solution, which may at least be fairly considered, and the lion rampant, being the well-known heraldic distinction of the province of Galloway, at once leads to the inquiry whether any grounds exist for the provincial arms being so used in pale with family arms, as seems to be possible in the present instance. The Gordons appear to have been a family of high distinction in Kirkcudbrightshire from the 14th century, when they first acquired possessions in the Glenkens. Two centuries afterwards we find the head of the family, James Gordon—who was killed at the battle of Pinkie, September 10th, 1547—appointed for a term of five years the King's Chamberlain of the Lordship of Galloway, both above and below the Cree; while his eldest son, John, mentioned above, was appointed by Queen Mary, February 9th, 1555, Justiciar of the Stewardry, an important office, in which he was reappointed some thirty years later by King James VI., and died in August, 1604, half a century after his first appointment to a distinction no doubt borne by him to the end of his life, but which does not seem to have been in any sense hereditary.

This question is not only interesting from a heraldic point of view, but also as to the date when the Kenmure aisle was first erected. If such a structure had been built during the long life-time and tenure of office of this John Gordon, so to combine the provincial arms with those of his family would appear to be not only justifiable but quite appropriate. In the case, however, of

an office not hereditary, but tenable only during the lifetime of an individual, it would be quite otherwise; and it appears to me that no subsequent descendant would be at all entitled to credit the family with the continued use of a distinction valid only during the lifetime of an ancestor. The real gist of the question then comes to be, that, in this peculiar combination of private and provincial arms, do we find a test of the period when, and the individual by whom, this aisle was erected, and, is that tradition about the grille being three hundred years old a fact, and not a fancy? According to the evidence adduced, the erection of the aisle must have fallen within the lifetime of the Justiciar, and if the view be adopted, that the lion rampant represents the undifferenced arms of Home, then its erection must be further limited to the lifetime of the Justiciar's first wife, Juliana. We may well believe that by way of reconciling both theories, Sir John rose to the humour of the situation, and impaled a cognizance appropriate alike to his wife, as a Home, and to the Province. So far as, in its severe simplicity, the style can be any guide—the aisle might just as well have been erected in the 16th as in the 17th century, and I trust that some of the members of the Society may be able to throw light on so interesting a topic.

I need scarcely remind the members of the Society that one great source of interest, not only in the church—now, alas! no more—but in the entire group of residential and other buildings associated with it, known in mediæval times as St. John's Clachan, was the fact that it lay on the great, and, in these early times, the only, highway of communication between the central districts of Scotland and its far south-west extremity, Wigtonshire. It was, indeed, a kind of half-way house to all those gentle or semple, royal or plebeian, who had occasion to traverse the wild and mountainous district, called the southern highlands, a journey by no means without peril of many kinds, from Nature in her wildest moods to the not less real dangers of an ever lawless and unsettled state of society. We may well believe that if the full romance of that road could be told in the varied incidents befalling the countless thousands who traversed it, the narrative would far outvie the most stirring of Chaucer's tales. More especially was this the route undeviatingly followed by the Scottish Kings in the pilgrimages they so frequently made to the shrine of St. Ninian; and not by kings only, but nobles and ecclesiastics of every rank and

degree. Although not the first in point of fact, yet the first of whom we have any distinct notice was Ailred (*Scottice* for Ethelred), a native of Hexham, and Abbot first of the Cistercian Monastery of Revesby and afterwards of Rievaux, both in Yorkshire. He was by no means a stranger to Scotland, having been brought up at the court of King David I., and educated with his son, Prince Henry. Of his visit to "Witerna," as he calls it, Abbot Ailred, has left a personal, but all too partial, record. In the twelfth century such a journey must have been a serious matter, the mode of travelling slow and tedious, the road a mere horse or foot track carried through a wilderness of moorland and mountains, which, to one accustomed to the sheltered and umbrageous valleys of the south, must have appeared in the highest degree sterile and forbidding. Emerging on the broad valley of the Cree, a glimpse would be caught by Ailred of those gleaming waters, never again to be lost sight of while he sojourned with his friend, Bishop Christian. There at "Witerna" he would see the new Cathedral, founded by Fergus, Lord of Galloway, in all its pristine splendour, an elaborately decorated example of Romanesque architecture, adorned as the Candida Casa itself could not have been, nor yet any subsequent addition. His eyes must thus have seen, and his thoughts been familiar with many things which, put on record by an intelligent observer, would have proved of priceless value to all after ages. Of Ninian's Candida Casa he could have told us the exact site, its dimensions and general character, and especially the state in which it was found after the lapse of nearly eight hundred years from its first erection. He might, with some facts, now forever perished, have bridged the gulf of four hundred years from the days of the Anglo-Saxon episcopate of the eighth century to the revived succession of Fergus. Yet, apart from that Life of St. Ninian—to write which was probably the chief object of his visit—there remains but the topographic vision of a great peninsula, extending "far into the sea on the east, west, and south sides, closed in by the sea itself," surrounded on every side save the north by a vast, desolate, ever-weltering waste of water, while at its furthest extremity, near this ocean's verge, like an Iona of the mainland, stood the object of his quest. Such seems to have been Abbot Ailred's first and last impressions of the locality he had travelled so far and with so much toil to see.

I trust I will be excused for dwelling so long on this memorable visit when I say that over four centuries pass away ere another notice occurs. The magnetic influence of St. Ninian had not ceased, and the pilgrim tide no doubt flowed on increasingly year after year, but no record has survived until, in the meagre, yet truthful, form of royal expenses embodied in State accounts, we find in the autumn of 1473 the youthful sovereigns, King James III. and Margaret of Denmark, traversing the rugged wilderness that led to the chief of Scotland's four great pilgrimages. They came in State, their object being to render thanks for the birth of an heir to the Crown—that James IV. who, just forty years afterwards, was destined, on one of the most fatal and disastrous days in Scottish annals, to fall at Flodden with the flower of the nation. He fell girt with iron belt and shirt of hair, penitentially worn for complicity in the death of that young sovereign—his own father—who, in all the joy and pride of early manhood, with his still more youthful queen, paid his devoirs at St. John's Kirk of Dalry on that early day in September, 1473.

Margaret of Denmark was then only in her sixteenth year, and the Lord High Treasurer's accounts contain various entries as to the due apparelling and convenience of herself and her retinue. There were three and a half ells "of blak for a riding goune to the Quene," with the same amount of velvet, and an ell and a half of "brade clathe." Also two and a half ells of "blak for a clok and a capiteberne for the Quene," with the same amount of "Scottis blak to lyne the samyne clok." There were also "panzell crelis to the Quene and hir passage to Sanct Ninianis," and "a pare of bulgz," no doubt bags. Six shillings were also "gevin to a Skynnare of Strineling for a dusane of gluffis to the Quene," also "Satyne for turatis to the Quene," and other items. For her retinue there are "lyveray gounis to sex ladys of the Quenis chalmire at hire passing to Quhytehirne," with "gray to lyne the sex gounis," with velvet "for the colaris and sleffis." A careful comparison of these various entries, with those relating to the King at the same period, brings out the interesting fact that Margaret of Denmark was herself the true heroine of the visit, and that the Scottish people then were just as proud of their connection with Denmark's Royal House as they have reason to be now. There can be no doubt King James accompanied her. In his accounts for this year the chamberlain of Galloway charges

the king's expenses at Wigtown, "tempore itineris sui apud Sanctum Ninianum." Apart from this casual notice in the Exchequer Rolls, although his preliminary outlays for the journey are given up to the same date, and as minutely as the Queen's, in curious contrast to those of his consort just given, the object of the journey is not once indicated. To the Queen herself, and those accompanying her, the interest of the journey must have been largely enhanced by the fact, that in terms of the arrangement made with her father, King Christiern, she was to enjoy a revenue equal to one-third of the Crown lands of Scotland, there was assigned to her the entire Lordship of Galloway, with the customs and burghal fermes, or rents of Kirkcudbright and Wigton, together with Threave Castle. Well might the Scottish people rejoice over the alliance, for the first time in their history were the outlying islands, north and west, embraced within the sway of a united monarchy.

No further record has been preserved till the fatal year 1488. Margaret of Denmark and her murdered husband now lie in their last resting-places at Cambus-Kenneth, and the five-month old infant, now a lad of fifteen, thrust into the throne over the body of his slaughtered parent, on the fourth of August sends eighteen shillings "with Schir John of Touris to offir for the King in Quhitherne," the first of a long series of penitential observances. In November, 1491, King James IV. paid his first visit to "Quhitherne," going and returning by the west coast. Although no references to it occur in the Lord High Treasurer's Accounts, in the autumn of 1493, James IV. must have traversed the route by St. John's Kirk and Clachan. We learn this from the Register of the Great Seal, he having, on the 29th of August, granted a charter at Durisdeer to William Douglas, son to the Earl of Angus, and on the 2nd of September, "apud Quhithirn," he confirms Alexander Makke, and Katharine, his spouse, in the lands of Balgarno. One entry in the accounts for July, 1496, gives us a glimpse of another visit. "Item, that samyn day, the King raid fra Edinburgh to Quhithyrne, and given to himself in his purs, xx*li* vj*d*."

In the succeeding year, by far the most minutely detailed account is given, embracing, one would imagine, almost every outlay. The royal visit was paid in the early part of September, 1497, and was one of thanksgiving for the cessation of hostillties,

and conclusion of a treaty of peace with England. The outward journey was from the north-east, and as a most interesting record of such an event we give the various items in full :—

Item, for the Kingis hors met* in Bigar, passand to Quhithirne, quhare the King batit ... ... xiiij*d.*
Item, the King passand at the Cald Chapel, giffin be the Kingis command to pur folkis ... ... xxij*d.*
Item, to the preistis of Durisdcr, at the Kingis command ... ... iiij*s.*
Item, to pur folkis in almons, quhen the King departit iiij*s* viiij*d.*
Item, to ane fidelar thare that playit to the King ... v*s.*
Item, to Hannay, at the Kingis command ... ... iiij*s* viij*d.*
Item, to tua pur men be the way ... ... xvj*d.*
Item, at Sanct Johnis Kirk of Dalrye, to the preist ... xiiij*d.*
Item, to pure folkis thare ... ... ij*s.*
Item, to ane woman with the grantgore thare, be Kingis command ... ... iij*s* vj*d.*
Item, to the wif of Durisder, quhar the King lugeit ... xiiij*s.*
Item, to pur folk at Wigtoune... ... ... ij*s.*
Item, in Quhithirne to the Kingis offerand ... ... xiiij*s.*
Item, to the pur folkis thare ... ... ij*s.*
Item, to say ten trentalis of massis thare for the King, be his command, and to his offerandis in Quhithyrne ... ... x*lib.*
Item, in Quhithirne, to the Priouris man of bridilsiluer for ane quhit hors he deliuerit to the King ... ix*s.*
Item, to Quintin, the Lord Hammiltounis man, of bridilsiluer, that samyne tyme ... ... iij*s* vj*d.*
Item, for schoing of the Kingis hors thare ... ... xx*d.*

Thus end the entries so far, the return journey being performed by the West Coast, Ayr, Kilmarnock, and Glasgow, and largely through the aid of "gydis," this route being evidently much less frequented than that by the north-east.

With the notice of another rapid visit, by the west, in April, 1498, on this topic, the published accounts of the Lord High Treasurer come to an end, and the extracts given may suffice to show the importance in mediæval times, both of the route in question and St. John's Kirk of Dalry.

* meat.

Chalmers and others give partial notes of many subsequent visits to St. Ninian's shrine, by King James IV., notably in the year 1506-1507, when in March he made a pilgrimage on foot, and in the following July, in company with the Queen, made a journey in state, which, in going and returning, took a full month to accomplish.

Notes on the Record-History of St. John's Church.

It is extremely probable that the early history of the Church of St. John merges in that of the Earlston Barony, with which, through all the many changes in the proprietorship, it is so invariably associated.

Many such changes must have preceded the earliest ownership with which the registers of the great seal make us acquainted, when in 1511, just two years before both donor and grantee fell on the fatal field of Flodden, King James IV., calling to memory the many arduous and faithful services of the deceased Patrick Hepburne, Earl of Bothwell, concedes to and confirms his son Adam in all the wide ranging possessions of his father, including the lands and barony of Erliston, with the patronage of the church of Dalry.

Nearly seventy years after, we find King James VI. at Stirling Castle confirming, in relation to the Church of St. John, a still more important document. It is a charter granted by Master John Hepburne, rector of the Parish Church of Dalry, whereby, for the sum of £100 paid in those turbulent times, he, with consent of James, Earl of Bothwell, Lord Halis and Liddesdaill, &c., the patron of the said rectory, in feu ferme set to John Hepburne, the son of his brother, Patrick, Bishop of Moray, his heirs and assignees, the glebe and church lands of Dalry, with the garden, houses, buildings (occupied by Fergus Achannane) lying on the west side of the "torrent" of St. John's Clachan (between Erlistonn on the north and Grinean on the south) paying to the said rector 14 merks (ancient duty) and 13 shillings and 4 pence of augmentation; also doubling the feu-duty on the entry of heirs; requiring also that there be built and maintained on the said lands suitable conveniences for lodging the said rector and his successors, with their servants and horses, at their own expense, whenever they should happen to stay there. In this document we have a wonderfully minute description of the

ecclesiastical state of Dalry in the middle of the 16th century, for although confirmed by King James VI. in 1578, the original charter was really granted and drawn up at Edinburgh in 1556, and brings before us several notable persons, alive when the charter was granted, but deceased at its confirmation. The patron was the notorious James, Earl of Bothwell, husband of Queen Mary, who was banished and died abroad just a year before the confirmation of the charter. Both granter and grantee were Hepburnes, the former a brother of the last Pre-Reformation Bishop of Moray. He was first prior of St. Andrews, then in 1535 Bishop of Moray, and perpetual commendator of Scone Abbey, and filled various high positions. Although deprived of his Bishopric at the Reformation, he kept possession of his Episcopal residence at Spynie Castle, and died there June 20, 1573, and was buried in the choir of Elgin Cathedral. The only ecclesiastic connected with St. John's in 1556 who was not a Hepburne was one of the attesting witnesses, Mr David Forman, pensionary vicar of Dalry.

The next entry brings us down to the year 1581, when, owing to the forfeiture of the Earl of Bothwell, who, as we have just seen, died in 1577, all his titles and vast possessions came to be vested, by gift of the crown, in his nephew, Francis Stewart, a grandson of King James V., who was at the same time appointed Lord High Admiral of Scotland. This sudden rise came to as quick a downfall, for in ten years, viz., 1591, the new Earl was himself forfeited, and deprived of all the honours and great estate the favour of his sovereign had conferred upon him. Becoming deeply involved in the religious and political intrigues of that time, as represented by the great contending parties owning allegiance to Queen Mary or her son, and being, as Hill Burton calls him, "perhaps the most daring, powerful, and unprincipled of all the higher nobles," very soon came under a like ban of forfeiture with his uncle, and so also fled the country, and died abroad. The next entry, dated Aug., 1591, follows as a direct result of this forfeiture, the barony of Earlston being detached from the vast estates of the Earls of Bothwell and conferred upon Andrew, Master of Ochiltree, a son of the good Lord Ochiltree, who did so much in forwarding the Reformation. So far the Registers of the Great Seal.

From the Acts of the Scottish Parliament two entries are given, the first being a ratification of the royal grant to Francis

Stewart, Earl of Bothwell, in 1581, already mentioned. The second brings us just a century further on, when the barony of Earlston, having passed into the possession of the Gordons, they in their turn now being proscribed and forfeited for a different cause from that which secured the downfall of their predecessors. The days are those of Charles II., and the barony is divided into equal shares between some of his officers who had distinguished themselves in hunting down the unfortunate Covenanters.

APPENDIX.

I.

Sir John Gordon of Lochinvar and the Family Arms.

A very good account of the Justiciar is given in Mr P. H. M'Kerlie's "Lands and their Owners in Galloway," vol. iv., pp. 56-58, *sub.* parish of Kells, and from a less known work we give the following notice:—

"XV. Sir John Gordon of Lochinvar, a man of great honour, loyalty, and integrity, who suffered greatly for his firm adherence to the interest of Queen Mary."

In 1555 the Queen appointed him Justiciar of the Stewartry of Galloway; and her son, King James, renewed his commission, anno 1587.

In the year 1561 he entered into a contract with the predecessors of the Duke of Queensberry, Earl of Dumfries, Sir Robert Kirkpatrick, Sir William Grierson, &c., whereby they were bound to stand by one another, against all mortals, to keep together in all assemblies, armies, and wars, and to submit all differences amongst themselves to the majority, &c.

In 1567 he is one of the subscribers of the bond for confirming the King's authority, and securing the Government as established by law.

He obtained a charter from Queen Mary of a great many lands, "*Johanni Gordon de Lochinvar, militi*," dated anno 1565; also a charter of the lands of Meikle Kilbride, 2nd February, 1596; also six charters from King James VI., *Domino Johanni Gordon de Lochinvar, militi*," of several other lands, and particularly one, "*Johanni Gordon, militi, filio et hæredi Margaretæ Crichton, filiæ et hæredis quondam Roberti Crichton de Kirkpatrick, &c., totas et integras terras*

de," &c., dated in 1580. He obtained charters of several ecclesiastical lands from Alexander, Bishop of Galloway, 1564, and from the Commendator of Tongland, 20th May, 1566.

In 1562 he made a resignation of the whole estate in favour of his brother, William Gordon of Penniughame, failing heirs male of his own body, he having then no male issue; and this William's grandson's grandson actually succeeded in the honours of Kenmure, as will be shown hereafter.

He married first Juliana, daughter of —— Home of Wedderburn, by whom he had one daughter, Margaret, married to Hugh, Earl of Loudon, in 1572.

In 1573 he married, secondly, Dame Elizabeth Maxwell, daughter of Sir John Maxwell of Terregles, afterward Lord Herries, in right of his mother, by whom he had five sons and four daughters.

Derwentwater, by Robt. Trotter, Edin., 1825. Appendix p. 165.

II.

Excerpt from Nisbet's Heraldry as to the Gordon of Kenmure Arms.

"Sir Robert [Gordon] married a daughter of William, Earl of Gowrie, and by her he had Sir John, his successor, whose arms are illuminate on the House of Fallahall, 1604. And in our old Books of Blazon, as that of Mr Pont's, Azure; a Bend, between three Boars' heads couped, or. Which Sir John Gordon of Lochinvar . . . was . . . created Viscount of Kenmure . . . He was succeeded . . . by his son John . . . but he dying without issue, the title came to John Gordon, his cousin-german, who dying unmarried, Robert his brother was heir to him; and he dying also without issue, 1663 the . . . honours devolved to Alexander Gordon of Penninghame . . . who carried for his atchievement, Azure; Three Boars' heads erazed, Or; Armed and langued, gules, supported by two savages, wreath'd about the head and middle with Laurels, holding Battons in their hands, all proper; and for Crest, a Demi-Savage in the same Dress, Motto, Dread God."

III.

Extracts from the Registers of the Great Seal, relative to St. John's Church, Dalry.

Registrum Mag. Sig. Regum Scotorum. Sub. 24. James IV. A.D. 1511.

"3635. Apud Edinburgh, 27 Aug. Rex,—Memoria revolvens fidelia servitia quond. Patricii Hepburne com. de Boithuile, &c. in singulis arduis materiis et negotiis infra regnum et extra ei commissis, in ipsius viti grave periculum, magnasque labores et sumptus et expensas que ejus consilio et prudentia in bonum deducte erant effectum;—concessit et confirmavit Ade Hepburne comiti de Bothuile filio dicti Patricii" inter alia . . . "de Erlistoun nuucupat Glenken, cum villis, &c., terras et baroniam molendinis, tenentibus &c., advocatione ecclesie de Dalry, infra senesc. Kirkcudbricht."

Registrum Mag. Sig. Regum Scotorum. Sub. 11. James VI. 1578.

2789. Apud Castrum de Striviling, 16 Jul. Rex confirmavit cartam quondam M. Joannis Hepburne, rectoris ecclesie parochialis de Dalry,—[qua pro summa 100 lib. illis turbulentis temporibus persoluta,—cum consensu (quond.) Jacobi com. de Boithuell dom. Halis et Liddesdaill &c., patroni dicte rectorie,—ad feudifirmam dimisit Joanni Hepburne filio fratris (quond.). Patricii episc. Moravien. heredibus ejus et assignatis,—glebam et terras ecclesiasticas de Dalry, cum horto domibus, edificiis (per Fergusium Achannane occupat.), jacen. ex occidentali latere torrentis de Sanct-Johnis-Clachame (inter Erlistoun ex boreali, et Grineane ex australi):—Reddend. dicto rectori 14 marc. firme antique, et 13 sol. 4 den. augmentationis; necnon duplicando feudifirmam in introitu heredum; et edificando politiam solo corresponden.; et probendo dicto rectori ejusque servis et equis hospitium sumptibus dicti rectoris quoties ibi remaneret:—cum precepto sasine directo Joanni Sinclaire et Joanni Portar:—Test. Joanne Portare Rob. Lermonth M. Davide Forman, vicario pensionario de Dalry:—Apud Edinburgh, 23 Nov. 1556].—Proviso quod hec confirmatio non prejudicaret rationabilibus manso et glebe ministro apud dict. ecclesiam servienti et residenti reservandis:—Test. *vt in aliis cartis &c.*—xxxv. 11.

Reg. Mag. Sig. Regum Scotorum, Sub. 14. James VI., A.D., 1581.

"218. Apud Dalkeith, 16 Jun. Rex. cum avisamento secreti concilii, concessit et quitteclamavit consanguineo suo Francisco Commendatario de Kelso, et heredibus masc. ejus de corpore legitime procreandis quibus deficientibus, regi reversuras." Inter alia "terras et baroniam de Erlistoun nuncupat, Glenken, cum villis, molendinis, tenentibus, &c., advocatione ecclesie de Dalry, in Senesc. Kirkcudbright."

Ibid. Sub. 25. James VI., A.D., 1591.

1904. Apud Edinburgh, 2 Aug. Rex. pro bono servitio, concessit Andree Magistro de Uchiltree, heredibus ejus et assignatis quibuscunque,—terras et baroniam de Erliston extenden. ad 40 librat. antique extentus, cum castris, lie parkis, pratis, molendinis, piscationibus, silvis, cottagiis, tenentibus, &c., advocatione ecclesie S. Joannis de Dunry, in senesc. Kirkcudbrycht;—que regi devenerunt ob forisfacturam quondam Francisci comitis Bothwell dom. Haillis et Creichtoun, &c.

IV.

Acts of the Scottish Parliament, vol. iii. p. 257. Sub. James VI. A.D., 1581.

Ratification of Royal grant to Francis Stewart, Earl of Bothwell, Ford Hailes, &c., *inter alia.*

"Tota et integra terras et baroniam de erlestoun nuncupat glenken cum villis annexis connexis partibus pendiculis dependenciis molendinis lie outsettis tenentibus tenandriis et libere tenentium seruiciis earundem et suis pertinen macum aduocatione et donatione ecctie de dalry jacen in senescallatu de Kirkcudbricht.

Ibidem, vol. viii. p. 323 h. sub. Charles II., A.D., 1681.

The patronage of St. John's Kirk of Dalry ratified to certain persons on the forfeiture of Gordon of Earlston :—1681.

Ratification in favours of Lieut. Col. Maine, Major Theophilus Ogilthorpe and Capt. Henry Cornwall of the lands and barony of Earlstoun and others. By thir presents ratifies approves and perpetually confirms a signature or warrand subscribed by His Majesty at Windsor 11 May 1680, equally and proportionally and

to their airs and assigneyes whatsomever heretablie All and haill the Lands and Barony of Earlstoun with the Castle Tower fortalice manor places houses biggings yards Orchyairds Parks meadows dow-cats, Cuningars Coalls, Coallheuchs mosses muirs pasturages woods fishings tennents tennandries and services of free tennents milnes milnelands and astricted multurs used and wont with all their pertinents lyand within the parochin of Dalry Stewartrie of Kirkcudbright and Shirefdome of Wigtoun comprehending the particular tounes lands patronage of St. John's Kirk of Dalry teinds parsonage and viccarage of the said parochin and uthers specified in the said Signature x x x and all pertaining heretably of before to Mr William and Alexander Gordounes elder and younger of Earlstoune.

13th March, 1896.

Mr Philip Sulley, Vice-President, in the chair.

New Members.—Messrs James Barbour, Glendarroch, Dalry; James Moffat, Bank of Scotland, Annan; John Neilson, Mollance. Castle-Douglas; Walter Ovens, Torr, Auchencairn; Dr Rossie, Newabbey.

Donations.—The Journal of the Elisha Mitchell Scientific Society of North Carolina; the 29th Report of the Peabody Museum, Harvard University; and the Report of the Natural Science Association of Staten Island, New York.

Exhibits.—Mr Rutherford exhibited a whorl found on the farm of Lochbank, Newabbey; and a flint arrowhead from Manitoba. Mr Sulley exhibited adder beads and charms.

Communications.

I.—*A Scottish Idyl.* By the Rev. Wm. K. R. Bedford, M.A., Hayes, Kent. (Communicated by Mr. J. W. Whitelaw.)

There is a pretty and somewhat fanciful painting by Millais, which was exhibited in the London Guildhall Loan Collection of 1894, which represents a childish drum-boy, in the uniform

familiar to the admirers of Hogarth's famous march to Finchley, playing on his fife, to the vast delectation of two or three bare-footed Highland lasses, to whose unsophisticated ears the shrill squeaking of the wrynecked instrument doubtless sounded sweeter, so prompt is the female ear to novelty, especially where the eye is also allured by comely lineaments and smart clothes—than the deepest drone and sprightliest chanter of their native pipes. The letters from which I have made a selection exhibit, I fancy, a parallel sentiment in the mind of the writer, and gain additional interest as throwing a sidelight on the social amenities which tempered, it would seem, a dolorous period of Scottish history. They emanate from the pen of Miss Jean Erskine, daughter of Charles Erskine, Lord Alva, Lord Justice Clerk of Scotland, afterwards wife of William Kirkpatrick of Allisland, one of the Clerks of Session, son of Thomas Kirkpatrick of Closeburn, and at one time member for the Dumfries Burghs.

"She was," wrote her grandson, Charles Kirkpatrick Sharpe, "a woman of infinite jest, yet possessed of a most sweet and amiable temper; she died young and heart-broken by the untimely death of a darling son and other domestic misfortunes."

Her portrait by Ramsay, painted at his best period (after his return from Rome), represents a fair woman with somewhat irregular features, yet of a very sweet and arch expression, which, added to her clear skin, and plentiful fair hair, gives her a very engaging look. Her husband, limned by the same pencil, appears a fine dignified looking man, calculated, as we know him from other sources to have been, to attract admiration and command respect.

The first letter is dated from Moffat, then a fashionable spa, and bears date the autumn of 1746, six months after Culloden, and is addressed to Miss Alicia Johnstone of Hilton—who afterwards married Mr Baird, and became mother of Sir David Baird, the captor of Seringapatam.

SWEETEST OF ALSIES,—We had the pleasure of yours after long Expectation, I can only repeat your own words write on my dear Johnston without leasing. We got your letter at four o'clock, and was obliged to deny ourselves the pleasure of reading it till ten o'clock at night, but when we did read it, we was (dr.

Alsy what shall I say we was); just as we used to be when you was with us; in short quite happy—but that like all other earthly pleasur's was fleeting, and of short duration. When we considered how much happier we would have been had we had your company in place of your Letter (Your Letter is so full of Moral reflections my Dr. Miss Alicie that I must give you one or two in my turn) I've used you very ungenerously Alcie for my first letter was writ with a Spirit that surprised myself, but don't Expect as much every letter or youll be cruelly disapointed, for I find in Spite of two or three bumpers of wine more than usual to-day, I'am not able to reach the same Stille—all this by way of Introduction to the many Incidents that has happened since our last, if I'm not mistaken Maguire * ended her letter with telling you that she was just going to a ball but (shortsighted mortals that we are) She did not see what that ball was to produce. I must in the first place let you know how this ball came about, the Baron and Capt. Makad (who as you guess are rivals) Cornet Smith and several others went to Sup together the night before, and Cornet Smith your friend who was mightily taken with Jenny Murray, proposed to stay next day if they would make a Subscription ball, and allow him to dance with her; upon which a motion was made that every man should dance with his flame; Then up spake the bold baron; Gentlemen, I declare before all this company that I am to dance with Miss Maguire tomorrow so let none dare to ask her after this; next day Maguire's friend Old Makad came up after dinner and ask'd her to dance with him, and pray What was to hinder him, he was not in the Company and how should he know anything about it. Well we all went to the ballroom, the baron Addresses himself to his flame, Madam I hope you'll do me the honour to dance with me to-night. Sir I am Ingaged, to Whom, to Mr Makad Sir, 'Tis Impossible, I don't know indeed Sir, he must yield you up Madam, you and him may speak about it Sir. Makad comes in. Sir says the baron you must yield up this Lady. No indeed Sir I won't, brav'ly answers Makad (Spite of his gouty toe). So Sir says the baron you won't yield her up you say, by all that's good your brother has put you upon this, but old Makad (Least a worse

* Miss Maguire was sister to the Countess of Glencairne. She afterwards married the "bold Baron," *alias* Lord Alva, Junior, my grandmother's brother.—C. K. S.

thing should befalle him) wisely did not hear these last words, but carryd off his prize in triumph to the midst of the dance, the Captain danced with Grissell, I danced with Carlisl (who would have had Miss Murray if he cou'd have got her) the baron look't terrible upon everybody the whole night, the Captain was a good deal pick'd ; for my Own Share I was only afraid of a Pinking Bout. We had a Supper after the ball but nothing happen'd, the baron Ingag'd the Lady for next ball at which ball there pass'd several things between them which won't do quite so well for the Subject of a Letter. In short he persecuted Campbell's discourse to the outmost, you know from experience Alicie they are a penetrating set of folks that are at Moffat, and as there was rumour next day of that gentleman's going away, everybody suspected the Reason, upon which pride, which is his predominant passion, made him act in a way that was agreeable enough to us. We met in the ballroom as usual at night, and played at blindharry, after some time I was blinded and going about, when I heard the door open and the fidles enter, and in a moment a man flew upon poor harry, and embraced me so close that I cou'd not Stire and kiss'd me a perdigious time. the Goodness Alicie, I grew blind Indeed. at last I disengag'd myself in a terrible passion you may be sure threw napkin and everything at him, made my complaint to Lady Erskine before the whole room Who pinch'd me so that I obliged to be calm—we spent a good part of the night in dancing after which he propos'd to the gentlemen as it was Saturday night to drink a health to their Wives and Mistresses, a table and glases were set and we supt very merrily upon cold tongue beef cheese ec. without knife or fork but rug'd with our fingers very heartsomly, he broke a glass in his own Mistress's health and poor Maguir was the butt of the whole Company and behav'd vastly well. Before the Supper Captn. Makad danc'd with Maguir, and told her of a Letter he had got from the Sheperd Adonis. It was full of his Love to pale Negligence there was a whole page filld up with scores such as —— —— —— which he said was so many Sighs ; sad was my Story Alicie. We parted that night invited by the Major on Monday night to the same intertainment. Apropos the Major, I believe nothing less than Blackney's Whole Regiment will satisfy Grissell (he is married its true so its the Less matter) prejudice goes a great way you know and I suppose he has heard of Grissie Erskine before he saw her ; She has

played her old headack upon us several times too, but I can't by any means prevail upon her to take her bed. We are very few in number now. Mrs Hume, Betty Stuart and Sweetest of Winnies are all gone. Winnie beg'd to be remember'd to you in the kindest manner. We had a letter from my sister Lawrie last week who beg'd us when we writ to Miss Johnston to make her compliments to her and tell her she hop'd she would not look upon her as a Moffat acquaintance. Farewell my Dr.

Moffat, Oct. 6. 1746. J. ERSKINE.

Grissell—my grandmother's sister, of a peevish ridiculous temper—"sweetest of Winnies," Miss Winifred Hairstanes, whose sister married my greatgrandfather, and was mother of the late Ladies Sutherland and Glenorchy.—C.K.S.

The first reflection which naturally occurs to one's mind on reading this humorous chronicle of high jinks and promiscuous flirtation, is that the gallant officers of Blankeney's regiment must have had reason to congratulate themselves upon their lot, as compared with that of their comrades in active service in the Highlands, hunting down unhappy Jacobite fugitives, and eradicating nests of caterans in gloomy glens and inaccessible straths, as remote and savage as the Carpathians or the Khyber are now. But it seems as if the young ladies themselves, representatives for the most part of the best Scottish families, were at least equally well pleased with their military partners, and the narrative of their proceedings helps us to appreciate the force of the remark recorded by Sir Walter Scott in his Irish journal, that probably few occupations of territory by an invading army have been totally devoid of the alleviations due to the interference of Cupid and Hymen. It is not quite easy to understand why the "bold baron" should have prefaced his impromptu entertainment, "rug'd with the fingers" of his fair guests, by the rude assault upon his own sister, poor "blind Harry;" but the result appears to have been highly satisfactory in obliterating the recollection of the previous passages of high defiance between the rival claimants for the hand of the fair Maguire. One would be glad to ascertain the exact nationality of the gallant brothers who shared the not very euphonious name of Makad, and to speculate upon the after career of Cornet Smith, who, though his rank, in a military point of view, scarcely entitled him to the prominence which he claims,

seems to have put himself forward as *arbiter elegantiarum* quite in the style of the dragoon whom Swift has immortalized in connection with "Hamilton's Bawn." That the ladies reciprocated his good opinion of himself as a squire of dames is rather amusingly evidenced in the next letter.

Dr. Johnston. I need hardly give myself the trouble of repeating what I daresay you are very sensible of by what you feel yourself, I mean the pleasure we have in receiving your letters, only I think our pleasure must be so much greater as we hear seldomer from you than you do from us. Why won't you write oftener my dr. Alicie, tho' there can't be so much variety in your letters as there is in ours, I assure you they are full as agreeable to us as they would be had they more variety; to give you an exact Journal of what has pass'd since our last, would take a great deal of time both to write and read but I shall give you some little Sketch of it. (I am sorry however that you have such a melaucholy time of it but I hope to hear a more agreeable account of you in your next). We came all here with Lady Erskine the day after your letter was writ and had the pleasure of meeting all our family here, next day we had a ball a pretty good one, there was nothing remarkable happen'd; next day which was Wednesday Lady E. and Miss Murray went about eight miles out of town to visit Lady Anandale, and stay'd all night and on Thursday we all met at Tinwald, about one o'clock, and din'd upon one of the Wrights tables, on a Cold Colation (if you please) which we had brought out of town with us. We were very merry, there was some little Rivalship between Miss Murray and Maguir about the Landlord, he coqueted a little with them both, and then dash'd both ther hopes at once by toasting Miss Johnston and telling some of her pritty little stories so that they both despaired of getting the better of you, at Last good Lady Erskine took her leave but was so good as to promise to write to us, Miss Murray and her went off for Moffat, and we wander'd about for some time, Viewing the beauties of the place (which papa set off with all his eloquence) and then came into the town, on Friday we walk'd thro' the town to let Maguire see it and in the most publick place of the city her ears were most gratefully saluted with the noise of a bourtree gun. She was so transported, she forgot where she was, and ran most precipitantly to the happy

owner of it, and offer'd to give any price he demanded. the little esquire set his price, and she gave it, to the admiration of many spectators, and all the way as she walk'd she canonaded so violently that the whole town was alarm'd and thought it was a French landing, by the time we were near our own house we found the whole dragoons drawn out to defend the place, but upon the sight of there Enemy, they water'd there horses instead of proceeding further to the attack, there was a search for arms, and that unlucky gun was found upon Maguire, by your friend, Cornet Smith, but she manag'd things so prudently, that instead of being taken prisner herself she brought the Cornet a prisoner to our house, we made a search likewise and made him lay down all his heavy luggage which was two pocketsfull of nuts, so we drank tea, and sang all the afternoon. Next day we all went to Maxwelton (Sir Robt.'s house) and spent eight days pritty agreeably in dancing and other country amusements, we had Mr Jervis with us nearly all the time, to my great joy Alicie, the Cleckin had been destroy'd some days before we went there, he insisted that Maguire should see his house before she left the country. We went and dined there, and was very handsomely entertained, and went to his brother all night. Next day we came to Dumfries, and he convoy'd us about three miles. When we came into town we received your letter but could not answere it with the post it was so late. Yesterday being the king's birthnight we had a ball, but you can't have the satisfaction in hearing of the balls here, that you had of the Moffat ones as you are acquaint with so few of the folks here but the few that does know you. I assure you asks after you very affectionatly. Now I think I have been very particuler in my account. I am now come to this night. About a dozen of us has keep'd our hallowe'en very merrily and now Maguire and I are sitting by the fireside, at one o'clock. She is preparing ane apple to dream upon and telling me now and then what to say to Johnston. She sometimes looks about to the door to see if she can see you sitting upon your carpet. Dr. Alicie we have often wished for you here, but since that won't do, hope we shall soon meet in Edinburgh. Maguire and Sussie and me goes in next week, and Grissie stays with my sister till Christmas and then, I believe, they both come in. Grissie wou'd write but she is sadly distress'd with her headacks, but she says she'll write to you after we are gone, direct for Maguire and me at Lord Tinwald's house Miln's

Square. EdR. Lady Glencairn writes to Maguire that she expects to meet her in EdR , so we shall only want you, my dear Alicie to make our happiness compleat,perhaps you'll be saying, it is not fit, but I hope it shall happen. I must end my letter sooner I us'd to do as there is an opportunity of this going to-morrow morning. Wishing you all health and happiness I am my dear Alicie yours

Affectionately,

J. ERSKINE.

Dumf. Octr. 31, 1746.

These spirited gossiping missives give a vivid picture, not only of the manner of the age, but of the playful warmheartedness of the writer. One or two shorter letters may help to show that her frolics with Miss Maguire and Cornet Smith, and her sarcasms at the expense of "papa's eloquence," and the "bold baron's" pride, or Grissy's headaches, were only the outer shell of a true and tenderhearted woman's character. Take, for example, the next letter to her favourite correspondent, Miss Johnstone. Miss Erskine had been married to Mr Kirkpatrick on Christmas day, 1746, and had suffered the first month of the new year to be advanced towards its close without announcing the event to her friend, whose possible displeasure at the neglect she thus prettily deprecates.

My Dr. Alicie, I know you are a little angry with me, and I won't say 'tis without reason, but as I never had the misfortune to see you the least out of humour at any one thing, I am very much at a loss how to behave in order to regain my former happiness again, you always flater'd me my dr. Johnston, in saying you thought there was a vast Similitude between our tempers. So 'tis very posible my dr. Alicie might have behav'd the same way, in the like case, you must suppose so, and forgive me, but indeed my dr. Alicie to show you how much you was in my thoughts, I sat down that night before I was (I can hardly write it yet) married, to write to you, and cou'd not make it out, and as we went out of town immediately after I had no opertunity. I am vastly sorry I am not to have the pleasure of seeing you in town this winter I had form'd twenty pritty little schemes to myself of being happy with my dr Alicie and sweetest of Maguires, but I cant help expecting you sometime this winter

yet, and we have an excelent bed here for Alicie to loll upon and tell a story, 'twas just got a purpose for you, so I hope you won't disapoint me. I saw my dr Lady Erskine yesterday, and surpriz'd her a little by taking her about the neck and kissing her before she saw who it was, but she return'd it in as great a hurry when she did see me, and laught at me about ten minets. I have been interupted about twenty times since I began this letter, but I will have it made out if the whole world should combine against me. I can't imagine what folks expect to see about me, in short they run about me, and stare so just as if I had got asses ears like Midas. I very often run to the glass to see if I have got horns, or someting that's monstrous about me, but I am happy enough never to discover anything there that displeases me. I was at the play last night, my first appearance, so you may guess I would sufer a good deal. I cou'd hardly get a man to lead me out, Mortifying: I was married they said, so 'twas no matter how I got out, who do you think led me out. Why, my old friend Doct. Bembridge, who is just now falen into an Estate, and seem'd to be in a vast surprize when he heard I was dispos'd of. My old way of speaking Alicie you know. Well my dr Johnston I expect a long letter from you soon in spite of our little toust, and I hope we shall still be the same that ever we was. Maguire has made that promise to me and I shan't be quite happy till I have the same from you. And O dear Alicie call me Jean if you love me. farwell my dear Girl and believe me to be most sincerely yours.

JEAN KIRKPATRICK.

Edr Jan 17 1746-7.

That the last letter produced the desired effect, and that no breach of friendship had occurred between the two maidens of modern Athens, who, like their classic prototypes Helea and Hermia, were two cherries on one stem, we may gather from the last billet of the series addressed to the "sweetest of Alicies," when her change of name had been notified to Mistress Jean Kirkpatrick, some six months after the former communication. Once more the pen indulges in the familiar terms of endearment, which, like the flowers of the spring time, are sure to grow rarer and less spontaneous towards the autumn of life.

If I had known where to have directed for my Dear Alicie, I shou'd not have been so long of wishing her all the Joy and happiness that is possible to be met with in a married Life. I am extremely sorry I shan't have the pleasure of seeing you this Summer, but there is no help for it, it is not fit it seems, tho' there is nothing I wish so much for as to sing once more in company with my sweetest of Alicies, Willys fair and Willys rare &c. So I am glad to hear you are grown so clever at riding since you left Moffat, it was lucky you was not seized with the Panick which poor Mrs Patton's horse was so misfortunate as to throw you once into.

I had almost pun'd a little here upon your venturing to ride a runaway, but thank my stars, I have escaped it, for I hate a pun. I pity you most heartily till your visiting time is over, or as papa us'd to call it your sitting time, by the by have you sent him a Willow Cokade I desire you'll have one ready for him the first time you see him, you must direct for Maguire at a place they call Auchendinen by the Dumbarton post, pray write to her soon, I desire my dr you'll do as you would be done by, I mean not to show my letters to your husband, now remember positively I won't so much as allow him to see my name, till I see him, and am acquaint with him, farewell my dear Alicie Baird.—I am, Yours affectionately,

JEAN KIRKPATRICK.

Though these are the sole specimens of the infinite jest of which her grandson speaks, yet they show tender feeling as well. The elegy on her death by Lord Hailes (the historian) is the only mention of her after this date which I have been able to discover, beyond the ordinary announcement of the birth of her elder and only surviving son. Lord Hailes' verses are composed in the fervid pastoral style then fashionable for such elegies, but, indifferent as they are, indicate an appreciation of the amiable qualities of the deceased on the part of the writer which give them some value.

"She died—eternal wisdom so decreed.
Dread Father, we submit, Thy will be done;
Yet must our hearts with fond remembrance bleed;
Yet Friendship must bewail Amanda gone.

"Witness those tears which for Amanda flow,
Witness her kindred sore with grief opprest,
Witness her hoary Parent's pensive woe,
And sighs quick throbbing from her Consort's breast."

II.—*A' Lorburne.* By Mr James Barbour, F.S.A.

The purpose of the following brief paper is to call attention to and put on record the existence of an ancient stone of some interest. It is affixed to the wall of a summer-house at Knockhill, situated in the Parish of Hoddam, about a mile and a half from Ecclefechan Railway Station, and long the residence of one of the Sharpes of Hoddam. The summer-house is hexagonal, glazed on three sides, and a stone and lime wall enclosing the other three is veneered inside with a variety of inscribed and sculptured stones. Some bear Roman inscriptions, a sculptured representation of a human head, of colossal proportions, is believed to be Roman workmanship; and others consist of fragments of ancient Christian crosses, beautifully sculptured and cut. The interest attaching to the stone under notice arises from the circumstance that it is inscribed with the motto or watchword of the Royal Burgh of Dumfries. The letters, raised and slightly ornamented, are fancifully arranged in three lines in the form of a pyramid at the right side of the stone. They are curiously graduated, the first line being $2\frac{1}{2}$ inches in height, the second 3, and the third $3\frac{1}{2}$. The stone itself, which is evidently incomplete, measures 23 inches in width and 14 in height. It is red sandstone, of tint and grain corresponding with the stone common in the neighbourhood of Dumfries. All the letters, except the last one, a little of which is wanting, are perfect; one, the third of the last line, is of a meaningless form, probably due to ignorance on the part of the stone cutter, but there is no difficulty as to the reading. The first line consists of the letter A
The second reads LOR
and the third BURNE

The inscription does not stand alone, but is accompanied on its left by a well-cut shield of tasteful form, bearing not St. Michael, the town's arms, which might be expected to accompany the town's motto, but a chevron between three fleur-de-lis.

The history of the stone may, I think, be traced so far. We learn from Dr Burnside's MS. History of Dumfries, written in the year 1791, that a stone carved with a shield bearing the arms, a chevron and three fleur-de-lis, and under it the word "A'lorburn" was then to be seen on the front of the prison of Dumfries, and the opinion is expressed that it had been part of an older prison

If the position assigned to the motto as being *under* the arms is taken in the sense of being lower down the street, which may well enough be allowed, Dr Burnside's description so completely applies in every respect to the Knockhill stone as to leave no room for doubt that it is identical with that which in the year 1791 was to be seen on the front of the Prison of Dumfries. How it comes to be at Knockhill is easily understood. The array of carved fragments on the wall of the summer-house witness the hand of the collector, who, it may be presumed, secured the stone when the old prison was demolished in the year 1808.

In regard to the period to which the stone is assignable, Dr Anderson, to whom I submitted a photograph, expresses the opinion that the style of the letter generally seems to indicate the period 1580 to 1600. The circumstances point to a period more remote.

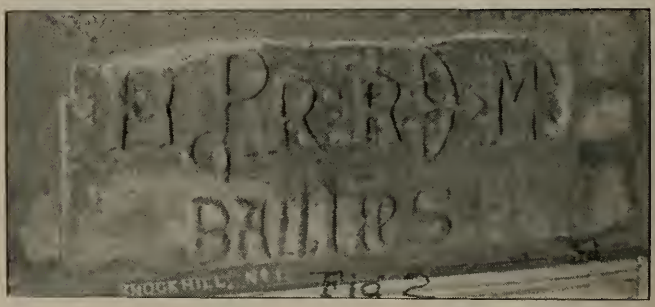
The meaning of this connection of the town's motto with the arms described, and of the motto itself, are matters of conjecture. Dr Burnside infers that these were the ancient arms of the town, St. Michael, which he says had been in use for a great many years, being, it was supposed, adopted subsequently. This, however, is unlikely, as St. Michael, the tutelary saint of the place, has always, so far as known, been borne on the municipal seal and other insignia. No. 1154 Laing's Seals, an imperfect impression found among some old papers in the Town Clerk's office, is thus described :—"St. Michael, armed with sword and shield, standing upon the vanquished dragon; at the sides a crescent and a star; inscribed, *S' Communitatis Burgi De Dumfries.*" No date is stated or suggested. For two hundred years at least St. Michael has been represented not with sword and shield, but a crosier, sometimes in the right hand, sometimes in the left, and the designs vary also in respect to the use of the dragon and the serpent.

A part of the stone is wanting, and it seems unlikely that it would originally be lopsided as it is now. The motto probably occupied the centre, with a shield on the right balancing the existing one on the left, and possibly the former bore St. Michael, the town's arms, while the latter, which corresponds with the arms of the Browns of Carsluith; Gilbert Brown, Abbot of Newabbey, and others, might represent an official or some one having a special connection with the burgh. In any case this would seem

to be a very early, probably the earliest, example of the town's motto known to be extant.

A' Loreburn, it is generally agreed, was a watchword or cry, and its origin is supposed to be connected with the Lower burn or Lor burn, which formed the inner line of defence of the town, and was manned, according to Peter Rae's account, as late as the year 1715; but perhaps it might be more in accord with usage to suppose the word to be the territorial or family name of a leader, whose designation came to be the rallying cry, "A Lorburn"—as for instance "A Douglas."

> The Border slogan rent the sky;
> A Home! a Gordon! was the cry.



The stone (fig. 1) is not without interest as a memento of the old prison, the scene of many stirring incidents, which stood at the

corner of High Street and the short and narrow street known as Union Street, the Council Chambers of the time being on the opposite side of the latter street.

Another ancient inscribed stone on the wall of the same summer-house (fig. 2) was probably also taken from the town of Dumfries.

III.—*Pearl Fishing in the South-West of Scotland.*

By Mr James S. Thomson.

The ignorance existing upon this subject was brought home to me by the following letter in the *Scotsman* :—

"In the 'Lord of the Isles' there is a beautiful description of Edith of Lorn in the hands of her maids preparing for her wedding with Lord Ronald. The pearls with which she was adorned came from Loch Ryan.

> 'These strings of pearl fair Bertha wound,
> That bleached Loch Ryan's depths within,
> Seemed dusky still on Edith's skin.'

All the books at my command speak of British pearls as being found in fresh water mussels, and make no reference to the arms of the sea. Is there a Loch Ryan on the mainland, or did Sir Walter know of something on the subject that is thus far hid from specialists?"

To this letter there was no answer. I set about trying to learn the localities where these pearls were found. Although well acquainted with the fresh water pearl, I knew little of their habitat. Although found in streams, I concluded that the natural locality for their growth was the lochs, of which there are so many in Galloway. In quest of this information, I first visited Carlingwark, near Castle-Douglas, where I was told they were in thousands, and formed the opinion that they were bred there, and although destitute of pearls, or nearly so, when in the loch, the hardships of the river and accidents caused the formation of the pearl. But on reaching the loch I could find no trace of them, not even an empty shell; but, on the other hand, the loch was crowded with the common (*Anadanta Cygnea*) Swan Mussel, numbers of which were to be seen on the banks of the water. These have sometimes a few small pearls, but are of no value for setting. In Loch Ken, Loch Skerrow, and the chain of lochs around Dalry (the "Raider" country) Mr Millroy assures me that he never heard of any being found, and he himself never saw any; and all with whom

I conversed had the same report—never saw such a thing, although quite conversant with them. Of Loch Doon, in Ayrshire, and its streams the same can be said. So much for the fresh water lochs. Regarding Loch Ryan, I have information that no pearls are found in the streams running into the loch, and the loch itself contains only those small blue-white pearls found in sea mussels, which are of no value as gems, and would shew dark on most skins. My investigations regarding the lochs were fruitless, but I obtained much information regarding the streams of that lovely country to which the mussel is partial. The pearl mussel is widely scattered over the country, and our land has long been famed for its pearls. The Romans were well acquainted with this gem in British waters, and many of them were sent to Rome, and it is said that one of the temptations to Cæsar's invasion was the abundance of pearls produced in this country, Cæsar having quite a passion for this lovely gem. There is as little likelihood of the Roman passing any water containing them as there is of our race passing over a country whose native inhabitants are wearing gold bangles without endeavouring to find the source from which it is procured. I have little doubt, notwithstanding what has been said to the contrary, that evidences of their residence will be found both by Dee and Doon. Pearls of great size have been found in Scotland, and it is said that more than one of the pearls in our Scotch Regalia are of native origin.

The Tay, the Forth, Don, Dee, and Esk in Aberdeenshire are famous for their pearls. Those on the Tay, from Loch Tay downwards, seem to have been a mine of wealth, a fishery existing here that was said to have produced £10,000 worth of pearls in four years, with the usual result that the Fishery was ruined. But no allusion is made, in any work to which I have command, of the streams of Galloway or Ayrshire; but nearly all the streams in the south-west of Scotland contain them—Nith, Cairn, Kirkgunzeon Lane, Cree, Dee, Doon, Fleet, &c. Shells are found in Nith at Blackwood, Ellisland, and Carnsalloch, and on Cairn they are found in several places, such as Snade Estate, Dalgonar, and lower down to Nith. I have also seen pearls got in Nith, but none of them were of any value.

The two streams that I particularly paid attention to are those most noted for their pearls—Dee and Doon. One fact I noted was that the fish has an aversion to still water, and I found

in those parts where the water has a sluggish lake-like current there were no living shells. For instance, while there are many about the Dee near Hensol, from the five miles of still water from Bridge-of-Dee down to Glenlochar Bridge there are no fish to be had, but at Glenlochon they commence again with the current, and are then found right down to Kirkcudbright. While they dislike still water, they have also an aversion to those wild rushes like what is found in lovely Ness Glen, and from Loch Doon right down the Glen none are to be found, their favourite haunt being nice ripples with gravel bottoms, or those little banks of gravel behind boulders. Both Doon and Dee are lake fed, and I have found that streams flowing from basins are usually better stocked than those that have no break to their currents, the still water seeming to have an equalising effect upon the temperature, as well as a clarifying influence upon the water, this being one of the reasons in my opinion why the upper Kirkgunzeon Lane has produced the splendid pearls I now show you (this is the property of Mr Clark of Cullochan, Terregles), and a fine cross was formed of pearls got here by the late proprietor's aunt, Mrs Marmaduke Constable Maxwell, of Terregles.

At first I asked myself, why should the fish be more plentiful in Dee and Doon than in other streams near them? Pollution might be the reason in Nith and Cairn, but I found on examination that such waters as Deuch and Ken, which above Dalry is an unpolluted stream, had few, not but what they are found here, for one lady assured me that she had a brooch set with pearls found in Deuch. There is also a circumstance connected with Dee that I mention that may have some influence, that is its high temperature compared with Nith. The observations were taken some years since by Mr Andson, and a correspondent on the Dee, viz.: —Nith, spring quarter (breeding season), 47·8; Dee, 50·9. Summer quarter—Nith, 60·2; Dee, 61·1. Autumn—Nith, 47·1; Dee, 49·8. Winter—Nith, 38·9; Dee, 40·2.

In some places on Dee mussels are very abundant. Mr Bridger informs me that on the moors above New-Galloway station, at a place called Barns Water, he took them out by the pailful, but, strange to say, with few pearls, although below this on Slogarie and Banks of Dee pearls are abundant, and four years since on Doon, below Dalmellington, they were taken out in loads. Indeed, I was assured that the slaughter was so great that com-

plaints were raised regarding the smell from the decaying fish. The effect upon the fishing was, however, most disastrous, and after such raids, it is years before the fishing attains to its usual state.

Regarding the formation of pearls, and especially the nucleus or beginning of the pearl, I have taken some interest, and examined a great many. I show you specimens of pearls cut to show the nucleus. Many writers at the present day speak of grains of sand as being the cause, but I must say in the hundreds I have examined I have never found such, or even a hard substance. No doubt pearls may be formed artifically by inserting substances, but in a state of nature I have never found such a thing. Examined through a glass, the beginning is seen to be a small round body of the size of a small pin-head, evidently an egg which has remained after the others have been expelled—perhaps unfertile. Looked at with a power of 120 this centre appeared as a circular spot apart from the rest of the pearl, and with a variety of cells. The structure was different from the rest of the pearl, and certainly there was no grain of sand. I show you a section, and on holding it to the light you will see the circular part, which here is perfectly defined. A writer in one of Chambers' articles upon Scotch and other pearls states that the colour of pearls is determined by the colour of the nucleus, but you will notice that the reverse obtains in those I shew you. The light coloured centre turns out a dark coloured pearl, and the dark coloured centre a light coloured one. A curious experiment was tried some years since upon the artificial production of a pearl with complete success. A lady had a pearl mussel in an aquarium. She one day inserted a small piece of beeswax inside the shell, and the fish coated it over with pink nacre, forming in course of time a beautiful pink pearl. There is a curious account of how pearls are formed by an old writer that I would like to quote. The pity is that his poetical conception should not be true. Speaking of the Scotch pearl mussel he says—"These mussels, early in the morning when the sky is clear and temperate, open their mouths a little above the water, and most greedily swallow the dew of heaven, and after the measure and quantity of dew which they swallow, they conceive and breed the pearl. These mussels are so exceedingly quick of touch and hearing that, however faint the noise or small the stone that may be thrown into

the water, they sink at once to the bottom, knowing well in what estimation the fruit of their body is to all people." In the East, a drop of rain caught by the oyster is supposed to be the origin of the pearl; and on Dee the fishers for pearls speak of the finest as dew drops. Whether the Chinese, a fresh water mussel, could be kept here I have not heard, but it readily lends itself to such production, and the wonder is that it has not been tried. Whether it would be possible to form pearls artifically has only once been tried in this district to my knowledge. The late Frank Buckland, whilst staying at the Hensol, a mansion on the banks of the Dee, near New-Galloway station, employed Mr Bridger, the butler, to get him some pearl mussels. He then proceeded to bore holes in them, and inserted pegs, but unfortunately for the experiment, the fish were swept away by a flood.

The shells that contain pearls are nearly always deformed. Indeed it is a rare thing to find a pearl in a well-formed healthy fish, and fishers can tell at a glance if the shell contains a pearl, and the more deformed the more likely to contain one of some size. These fish are often unhealthy, and the pearl I conclude to be the outcome of violence in some shape or other, or else of disease. An old farmer on the Hensol estate gave it as his belief that pearls were far more abundant when Irish cattle were pastured at the side of the river in great numbers, their trampling causing this condition of the shell. He had known the river for sixty years, and I afterwards discovered that below fords there are always more pearl-bearing shells than above them. Possibly, also, the floods may cause them damage by knocking them about amongst the stones, or the faulty shape may in many cases be a malformation.

The manner of fishing on both Dee and Doon is rather primitive. It is pursued during the warm weather, and the lassies on the Banks of Dee and Doon enjoy the sport as much as the males, and are equally successful. Experts bring to their aid a few articles of no great mechanical intricacy, one of them being a pewter pot with the bottom knocked out and replaced with a piece of glass. This, or an equally simple arrangement, is passed over the rough water, and shews the bottom very clearly on looking through it, great difficulty being found in recognising the fish owing to the shell being the colour of the stones. The putting forth of the light coloured foot is what is most quickly recognised;

but they are very wary, the least vibration making them close their shells. In shallow water they are raised by the hand, or those possessed of flexibility of toe can grasp and sling them into shallow water. For deeper water a stick about six or seven feet long, having a slit at one end, tied with cord to prevent its splitting, is used. This is forced over the shell, and the spring of the wood clasps it firm enough to land them. One ingenious party, who had been tantalised by a particularly nice-looking mussel in deep water, waited patiently until the fish opened its shell. He then gently inserted the point of his fishing rod, and on feeling the intrusion the shell was closed and the fish landed. Fishers with worm at times land them, the hook, getting into the open shell and the fish closing, cause their own capture. Long handled rakes, with a few long teeth, are also used. These are inserted below the shell, but an instrument of more ingenuity than any of these is two large inverted spoons attached to wooden shafts. These are jointed near where grasped by the hand. A spring keeps them open, but pressure closes them when required, and the fish is raised without trouble. The fishing is, however, of such a precarious nature that no one devotes himself to it. I have heard of people hunting the water carefully and getting nothing, and a tramp going down to the same part of the stream, and in ten minutes securing a fine pearl for which he secured 20s from a lady visitor to the locality.

As to the number of pearls found in Dee it is difficult to arrive at any proper decision, as they are sold in so many places, and such numbers of people fish for them, and either mount them or give them to friends. One young man got £10 for a number he got one year fishing at odd times, and various parties near Bridge-of-Dee secure a few pounds each season. As to size and quality, Mr M'Skimming of Kirkcudbright bought a very nice one, for which he gave £15, and it changed hands again for nearly double this sum. One of a dumb bell shape, of the size of a horse bean, as described to me, was sold for £10, and I shew you some lovely pearls, the property of Miss Bruce of Old Garroch, formerly of Slogarie. One of these is 21 grains in weight, round, and of a lovely colour, about the size of a wren's egg. One of great size and purity was said to have been found on Doon, and was sold for £70, but I am sorry to say I could not trace it. On this lovely stream some fine pearls have been got. The difficulty, however,

is in getting them with nice form, nice colour, and large size, for it must not be imagined that when you get a pearl in any stream it has all these qualities. I should say not one in a hundred have them; brown, bad shaped, and worthless are the rule, the others the exception. One jewellery traveller bought in one season in the town of Ayr £70 worth of fine pearls, and if we consider that, at least thirty jewellery firms visit Ayr during the season, and that most are willing, some anxious, to buy these gems; also that some of the largest were sold in Glasgow, Edinburgh, and even London, I think I shall be within the mark in saying that four years since £300 worth were disposed of in one season.

The value of a pearl varies, however, upon the demand. A fine pearl will always command a market, but circumstances increase its market price materially. A diamond can easily be secured to weight and colour, but a pearl for matching is often difficult to obtain. I may illustrate this by what happens in Hatton Gardens amongst dealers. At times a pearl may be in the hands of a dealer, for which he asks £50 to-day. To-morrow it is whispered that a Bond Street firm wish a gem of certain size and colour for matching, and the merchant at once raises his price to £75 or even £100. A merchant dealing in stones told me he had an open commission to buy 5-carat Scotch pearls for a necklet which a jeweller was forming for a lady, and he had the greatest difficulty in matching colour and size, so few were for sale, and the matching can only take place by laying them alongside one another, the gradations of colour are so great. This matching is one of the causes of the fabulous prices of pearl necklaces and other articles of jewellery. On the other hand I have known pearls sent to London for sale, and the parties got less for them than was offered at their own door.

Regarding the number of mussels in the water, complaints are made of the rivers being cleaned out when the waters are exceptionally low. No supervision has ever been attempted, and anyone is allowed to take that could find them, the small being taken as well as the riper ones.

Regarding the colour and value of Scotch pearls, some of them are really lovely, as lovely as pearls of the Orient; and in so far as they are well coloured and shaped, are of equal value to those of the ocean. But to be sought after they must be pure in colour and faultless in shape.

It has often been a mystery to me that Burns never mentions the pearls of Doon, seeing that he lived near where they are found (from Dalmellington to the sea); possibly his ignorance of their value might account for this. One old man to whom I spoke to about them assured me that in his younger days they used to "niffer them for bools," and the boys used to carry about a quantity in their pockets, but never dreamed of selling them for money.

As to the time that it takes to form a pearl I am sorry to say, notwithstanding much enquiry, I have no definite information. The Chinese are very skilful in using their fresh water mussel for various purposes, one being to coat little images with the pearly nacre; these are inserted inside the shell. Half pearls are formed in a few years, and passed off as real pearls, the basis being a small round piece of mother-of-pearl. Another plan is to scrape a small piece off the shell, and in its place a small piece of pearl the size of a shot is inserted. Could this mussel not be acclimatised? As an object for the aquarium it would be of much interest, and if we can take trout to New Zealand, why cannot we bring this bivalve to Britain? But why not try the cultivation of the Scotch pearl in Scotch rivers or burns? A couple of miles of river could be cheaply hired and cheaply stocked. Our landed gentry might grow their family pearls just as easily as their family timber Art aiding Nature might produce unheard of results. The matter has yet to be studied, and there is no reason why, in this utilitarian age, these bivalves should not be set to work to minister to human fancy as much as the silkworm, and with no more pain. We know so little about the matter that it is within the bounds of probability that situation, food, and selection might produce at will gems of rare value. What Frank Buckland tried might be tried with more success. A hole might be bored in the shell, and pearls of no value inserted. These might form the nucleus of larger pearls. I do not see why colour in pearls should not be studied, the changes from a dark beginning to a clear outer skin and *vice versa*. Are they the result of food, or situation, or light? In the fresh water mussel the matter is in its veriest infancy, and with observation Nature might be made to yield her secret.

As to the food value of the oyster, I am afraid that any one trying it will find it insipid and tasteless, and to make it savoury a

good cook would be necessary. The eel, however, seems to have quite a different idea, and the dragging of an open shell through the water soon puts him in motion and on the outlook.

The using of the pearl mussel in the forming of pearls by the Naturalist Linnæus has just come under my notice, but it seems, although taken up by the Swedish Government, to have turned out a failure. But the scientist is seldom well adapted for the practical work, and I am still under the belief that the matter is of a practical kind.

The aquarium, or a fountain like that used by a late member of this Society, is the most likely method of learning the life history of the mussel and its offspring, the pearl, and I trust that some one of our many members will use this means to elucidate some of the problems in its life history.

A paper upon pearls would not be complete unless Cleopatra and her famous pearl were introduced. The famous banquet, the dissolving a pearl worth £80,000 in vinegar, and the drinking of this costly mixture, has always been introduced to point a moral. I have tried a good many experiments upon pearls to test the effect of vinegar upon them; have steeped for hours small oriental pearls in strong vinegar, then in strong acetic acid, then nitric acid, with very little result. I handed a pearl about a grain and half in weight to Mr Neilson, of Dumfries Academy, with the same result as regards vinegar. Spirits of salt were then tried for two hours, and the pearl was reduced a very little. Something must be wrong in the telling of this charming bad story about Cleopatra's pearl. From the value, I should say it was at least 200 grains in weight, and you can compute for yourselves, if it took five hours to reduce a pearl one grain in weight in spirits of salt, how long would it take to reduce one of 200 grains or more in weight. If dissolved it certainly was not by vinegar. If it was drunk at the banquet, the probabilities are that it was ground down or crushed and then swallowed, a costly but nauseous draught.

20th March, 1896.

Mr William J. Maxwell, Vice-President, in the chair.

A meeting, largely attended, was held in Greyfriars' Hall, at which the following paper was read:—

The Inscribed Roman Stones of Dumfriesshire. By James Macdonald, LL.D., F.S.A.Scot.

The practice of setting up stones to perpetuate the memory of events is widespread and of great antiquity. Among an unlettered people a simple unhewn pillar bore silent witness to the truth of the tale that would be told in after years to those who asked what the stone meant.

With the advance of civilisation such commemorative pillars became covered with allegorical sculptures or with inscriptions composed in the language of those by whom they were erected. In Italy a very considerable number of inscriptions of this kind still exist, written in the Latin language, and dated, some of them, long before the commencement of our era. The subsequent extension of the Roman power into other countries was marked everywhere by inscribed stones, many of which remain, and are the most trustworthy evidence we possess of the extent and reality of the imperial conquests. This mode of writing history reached perhaps its highest development in Roman and Romanized lands during the second century after Christ.

The alphabet used by the Romans for inscriptions was that known among us as Roman capitals. The letters vary somewhat in form according to the nature of the stone, the taste of the stonecutter, and the period; but one cannot help being struck with the resemblance they bear to those with which we are so familiar. Whatever else has been changed for the better within the last two thousand years, the Roman capital letters have not been found susceptible of much, if any, improvement.

Some peculiarities there were. To save space, two or even three or more letters might be joined so as to form what is called a ligature or nexus. In some inscriptions ligatures are numerous; others are almost free of them. Words were seldom written in full, being almost always abbreviated. The first letter or the first two or three letters usually stand for the whole word. These

abbreviations and ligatures are somewhat confusing. But without a knowledge of the system generally followed in making them, the text of the inscriptions cannot be properly understood.

Each word should be separated from the next by a point or dot, though this was not seldom omitted. Sometimes the letters are all close together on the stones. Instead of the round dot, a small triangle is often used. After the first century the ivy leaf is not uncommon. Various other forms of the point are found, but all of them are placed in the middle of the line, and not, as with us, at the foot.

Certain letters were also employed as numerals, though some of them had at first nothing to do with the particular characters the form of which they came to assume. To distinguish numerals from letters, a stroke was drawn through the former in republican times; afterwards it was put over them.

The Roman inscribed stones hitherto found in Dumfriesshire may be classified thus:—Altars or votive slabs, dedicated to divinities; stones bearing honorary or commemorative inscriptions, including those that are sometimes called legionary; sepulchral monuments. Briefly stated, the conventional forms employed by the Romans for each of these classes of inscriptions are as follows:—

1. Altars.—First comes the name of the divinity in the dative, dependent on the word *sacrum*, or some contraction of it, expressed or understood. This is followed by the name of the dedicator in the nominative, often with particulars added regarding his family, country, or profession, or the circumstances under which the altar was set up. Lastly, we may have a verb or phrase expressing the idea of the altar being a gift, or the fulfilment of a vow, to which, when *sacrum* is wanting at the commencement, the name of the divinity may, at the option of the reader, be attached grammatically.

2. Stones, Honorary or Commemorative.—These begin with the name and titles of the person in whose honour or in whose time the stone was raised, whether a statue or a historical tablet. If the inscription is honorary, these are in the dative, depending on a verb that comes, or is supposed to come, after; but if time is denoted they must be regarded as in the ablative. Owing to contractions and the frequent identity in form of these two cases,

it is often impossible to decide how the words are to be taken. Next there is the name of the person or persons who erected the statue or tablet, with some information regarding them, the name usually standing in the nominative to *fecit*, *posuit*, or other verb of kindred meaning, frequently not expressed. A simple legionary tablet bears only the name and the title of a legion.

3. SEPULCHRAL STONES.—Inscriptions on these generally commence with the words, *Diis Manibus*, or a contraction of them, in the dative governed by *sacrum*, often omitted. Then follows the name of the deceased person, with his age and other particulars, more or less full, generally in the nominative, as being the subject of a verb (*vixit* or *situs est*) expressed or understood; but it is sometimes put in the genitive, dependent on *Diis Manibus*, or in the dative, as in No. 9, and made the indirect object of a verb, the subject of which is the name of the person who caused the stone to be erected. The relation of this person to the deceased, or other particulars, are often added to the name.

Of the stones to be here noticed the altars are the most numerous and, with one exception, the most important. In form a Roman altar was an adaptation of a pedestal, and consisted of a moulded base, a central portion, and a capital, on the top of which the gift was laid or the offering burnt. This top might be simply a flat space, or it might have ridges along its front and back edges, which became cushion-like rolls or volutes at the two sides, so as to leave an enclosed space. This is the case in No. 10. In most of the Birrens altars, however, there is a different arrangement. Between the volutes there rises a projection with a bason-shaped sinking, which, in some cases, takes the shape of a *patera*. All these hollows, of whatever character, are generally termed *foci*, or "hearths," as if intended for the fire of the burnt-offerings; "but," remarks Professor Baldwin Brown, "it has been urged, with much show of reason, that when the sinking is bason-shaped, as on the class of altars so largely represented at Birrens, or is even fashioned into a stone patera, it is meant to receive libations, or, at most, the blood of the victim, and not a fire to consume the offering."* Usually an inscription fills the whole or

* Structure and Ornamentation of the Birrens Altars, *Proc. Soc. of Antiq. of Scotland*, vol. xxxi., pp. 169-178.

a part of the central portion. Various devices, some of them of an ornamental, some of a significant, character, enrich the different parts of the altars, while on one side may sometimes be seen the sacrificial axe and knife, on the other the *urceus*, or jug, for holding the libation-wine and the saucer-like *patera*, with or without a handle, for receiving it when poured out. Of those in this list the most tasteful in design is No. 24, while the most interesting, both on account of its inscription and its ornamentation is the Disciplina altar, No. 23. Much interesting information regarding all of them will be found in Professor Baldwin Brown's paper already referred to.

More Roman inscribed stones have been found in Dumfriesshire than in any other county of Scotland; but they all probably belong to one locality—Birrens. In the present paper the letters of the inscriptions will be printed in plain capitals, without ligatures, and always with a space after each word or part of a word, no attempt being made to show peculiarities of lettering. The known facts in the history of the stones, and any points of interest regarding their ornamentation or inscriptions, will be briefly noted. Those who may wish for fuller details will find them in a paper printed in vol. xxxi. of the *Proceedings of the Society of Antiquaries of Scotland*, of which what follows is little more than an abstract. The volume just mentioned contains special reports by members of the Birrens committee on the excavations recently carried on there at the expense of the National Society, in the course of which important additions were made to the inscribed stones of Dumfriesshire.* It is understood that Mr James Barbour will read a notice of operations that were so fruitful in results at a subsequent meeting of this society. Any further reference to them here in connection with the discoveries then made is thus rendered unnecessary.

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* Account of the Excavation of Birrens, a Roman station in Annandale, undertaken by the Society of Antiquaries of Scotland in 1895: (1) General History of the Place and of the Excavations, and Description of the Defences. By D. Christison, M.D., Secretary. (2) The Interior Buildings at Birrens. By James Barbour, F.S.A.Scot., Dumfries. (3) The Inscribed Stones. By James Macdonald, LL.D., Vice-President. (4) The General Structure and Ornamentation of the Altars. By Professor Baldwin Brown, F.S.A.Scot. (5) The Pottery, Bronze, &c., found at Birrens. By Joseph Anderson, LL.D., Assistant-Secretary and Keeper of the Museum.

The stones are taken up in the order in which they were from time to time discovered, so far as that can be ascertained.

In the attempt to ascertain the true reading and meaning of the inscriptions, both of which are in some cases obscure, much valuable assistance has been received from Mr F. Haverfield, M.A., F.S.A., Christ Church, Oxford.

1. A fragment of an inscribed stone containing these letters was seen at Birrens in 1729 by Sir John Clerk; probably also by Alexander Gordon a few years earlier. It was at that time built into the wall of a cottage. Horsley (*Brit. Rom.*, p. 207) states that Sir John intended removing it to Penicuik House; but there is no evidence that he did so. Both Bishop Pococke and Maitland saw it at Birrens in the same position a number of years afterwards.

AXAN
CONIS

The fragment seems to have been long lost. Both the character of the stone of which it had been a part and the meaning of the letters are uncertain. Horsley conjectures that it may "have been of the centurial kind.

2. (Pl. I., fig. 3, and pl. II., fig. 4.) Found in 1731 at Birrens by Sir John Clerk in an old building that stood in the grounds of Land, and near the west side of the station; preserved at Penicuik House, Mid-Lothian, from 1731 to 1857; presented in 1857 to the Society of Antiquaries of Scotland by Sir George Clerk, Bart.; now in the National Museum, Edinburgh.

A statuette of Brigantia, who was probably the eponymous deity of the Brigantes, a powerful tribe in possession of a great part of the north of England, and perhaps of some portion of the south of Scotland, at the time of the Roman invasion. It stands in a hollow niche, 3 ft. $\frac{1}{2}$ in. high and 1 ft. 6 in. broad at the base.

The goddess is represented with wings, and as dressed, partly at least, in the garb of a Roman warrior. On her head is a castellated ornament, in her right hand a spear, in her left a ball. At her side is a shield, on her breast a small Gorgon's head. The art of this piece of sculpture is by no means of a high order of excellence.

BRIGANTIÆ . S . AMANDVS
ARCITECTVS . EX . IMPERIO IMP

The S in the middle of the first line of the inscription stands for *sacrum*. IMP at the end of the last line has not been satisfactorily explained. Sir John Clerk thought he saw an additional I;

and this reading of his has given rise to a number of conjectures as to the proper expression and meaning of the supposed IMP I. But what he took to be an I is almost certainly either part of the line of a narrow moulding or an accidental flaw in the stone. Fig 3, pl. I., is an enlarged view of the inscription. Leaving the IMP out of account, we may translate:—"Sacred to Brigantia. Amandus, the architect (erected this), by command . . ."

Amandus, as a proper name, appears in England and on the Continent.

3. Same recent history as 2.

This altar-shaped stone is 2 ft. 6½ in. high and 1 ft. 6¾ in. broad at the base. In its top there is a hollow space 13 inches long by 8 inches wide and 2 inches deep. On the left side are sculptured a *patera*, or libation pan, with a plain handle, and an *urceus*, or pitcher; while on the right is a patera-like disc with a rosette in its centre; and slightly above, but not quite in line with them, a bird quietly resting on a ball.

There are several ligatures and contractions in the inscription, which, however, presents no difficulty except COLLIGN, cut on the stone without any stop. Dr Mommsen expands them into COL (*umna*) LIG (*nea*), which gives the most satisfactory explanation that has yet been proposed. According to this view the whole should be read and translated thus:—*Deo Mercurio* [*sacrum*]. *Jul*(*ius*) *Crescens sigill*(*um*), *col*(*umnam*) *lig*(*neam*), *cult*(*oribus*) *ejus d*(*e*) *s*(*uo*) *d*(*edit*). *V*(*otum*) *s*(*olvit*) *l*(*ibens*) *m*(*erito*); *i.e.*, "Sacred to the god Mercury. Julius Crescens, from his own means, presented this small image, a wooden column, to the worshippers of that god. Willingly, deservedly, he fulfilled his vow."

DEO . MERCV
RIO IVL CRES
CENS SIGILL
COLLIGN . CVLT
EIVS . D . S . D
V . S . L . M .

If this expansion and translation be correct, the hollow in the top may have been intended to receive a statuette of Mercury resting on a wooden column, or a pillar of wood surmounted by the head of that god.

In the Museum of the Yorkshire Philosophical Society there is a small but richly-ornamented altar which was found in 1880 in the garden of St Mary's Convent, York. It is dedicated to the goddesses of the house and hearth by C. Julius Crescens, who may be the same as the Julius Crescens here mentioned.

4. (Fig. 1.) Same recent history as 2 and 3.

A plain stone, 2 ft. 7 in. in height and 1 ft. $2\frac{3}{4}$ in. in breadth. The letters of the inscription are well cut. It will be observed that the ivy leaf is used as a point throughout.

NVM . AVG
DEO . MERC
SIGN . POSV
ERVNT . CVL
TORES . COL
LIGNI . EIVS
DEM DEI CVR
ING . RVFO
V S L M

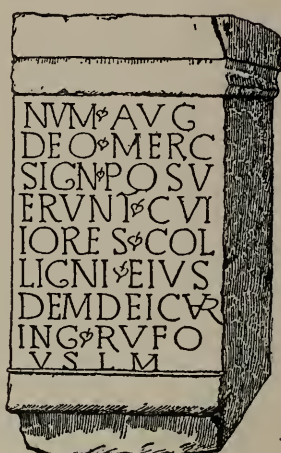

Fig. 1. (Scale, $\frac{1}{12}$.)

The meaning of COL LIGNI must be held as determined by the expansion assigned to the similar letters of the preceding inscription. *Numen* and *Numina Augusti*, guardian deity or deities of the emperor, frequently occur on Roman monuments, sometimes alone, sometimes, as here, along with the name of a well-known divinity. The substitution of *i* for *e*, which we have in *lignius*, occurs in other words. Expanded, the inscription will read :—*Num*(*ini*) [or *Num*(*inibus*)] *Aug*(*usti*), *deo Merc*(*urio*), *sign*(*um*) *posuerunt cultores col*(*umnae*) *ligni*(*ae*) *ejusdem dei, cur*(*ante*) *Ing*(*enuo*) *Rufo. V*(*otum*) *s*(*olverunt*) *l*(*ibenter*) *m*(*erito*); *i.e.*, "To the guardian deity of the Emperor (and ?) the god Mercury, the worshippers of the wooden column of the same god have erected this image under the superintendence of Ingenuus Rufus. Willingly, deservedly, they performed their vow."

This stone has few of the characteristics of an altar, and certainly seems to have been a pedestal for the support of a wooden

"column," though without a receptacle for the block. Sir John Clerk informs us that, believing a statue of the god Mercury was lying somewhere near the place where he first saw the stone, he caused a search to be made for it, when the body and limbs of a figure of great size were discovered. It appeared to have been broken in pieces, and afterwards repaired by joining the fragments together. From this he mistakenly inferred that the statue had been shattered in pious indignation by Christians in the reign of Constantine the Great, and set up again in that of Julian, the Apostate. There is not a shadow of ground for such a supposition. The "statue," whatever it was, has not been heard of for a long time.

5. "From Middleby" (Sir J. Clerk); in the Penicuik collection till 1857; presented in that year by Sir George Clerk, Bart., to the Society of Antiquaries of Scotland; now in the National Museum, Edinburgh.

A small legionary tablet, 4½ in. high and 9 in. broad. A piece has been broken off from the stone both at the top and at the bottom. A plain wreath or a torque surrounds the number of the legion. Early in the last century Birrens was spoken of as the "Fort of Middleby."

LEGIO
V VI P
F F

Expanding the letters of the inscription, we have:—*Legio VI., V(ictrix), p(ia), f(idelis), f(ecit), i.e.*, "The Sixth Legion, (called) the Victorious, loyal and faithful, set this up."

It is uncertain what purpose these small tablets and certain stones of like dimensions, known among British archæologists as "centurial," could have served. When found within a station they are supposed by some to have marked the place assigned as quarters to a particular detachment or century.

6. (Fig. 2.) "Found at the station at Burrens" (Pennant); seen by Pennant at Hoddam Castle in 1772; remains there (1896).

A small altar of neat design, 2 ft. 3½ in. high, 1 ft. broad at the base, and 1 ft. 2 in. at the top. It is ornamented at the base and the capital with mouldings of some width, and on the top of the latter are volutes with a bason-shaped projection between them. Its surface is much decayed by exposure. The letters are only fairly legible.

Pennant, who read SACGAMIDIAHVS as one word, seems to have been greatly puzzled with this inscription. "I did not fail," he tells us, "consulting the learned on this occasion, but they rung such a number of changes on the words that I content myself with giving the plainest reading."

DEAE
HARIMEL
LAE . SAC GA
MIDIAHVS
ARC + VSLLM

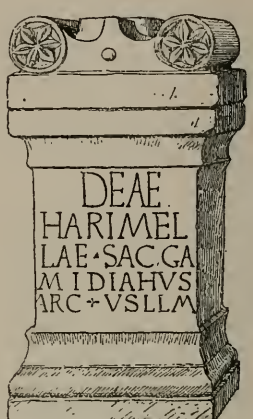

Fig. 2. (Scale, $\frac{1}{12}$.)

The altar is dedicated to Harimella, otherwise unknown, the tutelary deity, no doubt of a district with which the dedicator was in some way connected. The fourth character in the last line is +, not ×, as Pennant. ÷ is here perhaps a variety of ⁻⁻, which so often represents IT. We may thus expand:—*Deae Harimellae sac(rum). Gamidiahus arcit(ectus) v(otum) s(olvit) l(ibens) l(ubens) m(erito)*; *i.e.*, "Sacred to Harimella. Willingly, gladly, deservedly, Gamidiahus, the architect, has performed his vow."

7. Same recent history as No. 6.

An altar of the same type as the preceding, but somewhat larger, being 2 ft. 5½ in. high, 1 ft. 5¾ in. broad at the top, and 1 ft. thick. It is similarly ornamented, but with the addition of a crescent resting on a pyramidal support between the volutes. The inscription is very much weather-worn. Without the aid of Pennant's text and figure it could hardly be read now.

DEAE VIRADEC
THI PAGVS CON
DRVSTIS MILIT
IN COH II TVN
GROR SVB SILV
O AVSPICE PRÆF

The altar is dedicated to Viradecthis, probably a German or Gaulish deity. PAGVS must be taken as the name of a district, not of an individual. CONDRVSTIS is an ethnic adjective derived from the *Condrusi*, a tribe spoken of by Cæsar (B. G. iv. 6, &c.) as inhabiting, along with the Eburones, the basin of the Meuse, which was in later times the home of the Tungrians.

If we now expand the inscription we shall have:—*Deae Viradecthi* [*sacrum*]. *Pagus Condrustis milit(ans) in Coh(orte) II. Tungror(um) sub Silv[i]o Auspice, praef(ecto)* [*fecit*]; *i.e.*, "(Sacred) to the goddess Viradecthis;" *i.e.*, "The Condrusian district (= the soldiers from that district), serving in the Second Cohort of Tungrians, under the command of Silvius Auspex, the prefect, (erected this)."

The name of the same prefect of the Tungrians appears on several other Birrens stones.

8. "Found at the station at Burrens" (Pennant); now at Knockhill, near Ecclefechan, in a summer-house (1896).

The pedestal of a statue of Fortune (a fragment of which still remains attached to it), 11½ in. high and 1 ft. 2 in. broad. It is without any ornament except a plain moulding at the base. The right corner of the slab has been broken off, so that the first two lines, and probably the third, are incomplete. In the first Pennant read R, now seemingly an I. Fortune was one of the official deities of the Romans.

FORTVNAE I
SALVTE P CAMPA
ITALICI PRAEF COH I
TVN CELER LIBERTVS
L L M

Completing and expanding, we have:—*Fortunae R(educi) (pro) salute P. Campani, Italici praef(ecti) Coh(ortis) I(I). Tun(grorum), Celer Libertus* [*votum solvit*] *l(ibens) l(ubens) m(erito); i.e.*, "To Fortune that brings the absent back, Celer, a freedman, for the safety of [his master] P. Campanus, an Italian Prefect of the Second Cohort of Tungrians, gladly, willingly, deservedly (performed his vow)"

9. (Fig 3.) Same recent history as No. 8.

A sepulchral slab, 7 ft. 4½ in. high and 1 ft. 10½ in. broad. The surface has suffered greatly from exposure, but except part of the fifth line the reading can still be made out.

Instead of the actual text, Pennant gives an expansion of it, which has been copied by all subsequent writers. There is an

inscription (Henzen's, No. 6773), which seems to fix the meaning of *ordinato* here as "Centurion." Pennant inserts *tribuno* after *ordinato*, but without any authority.

D M
AFVTIANO
BASSI . OR
DINATO .
COH II TVN
FLAVIA . BAETI
CA CONIVNX
FAC . CVRAVIT

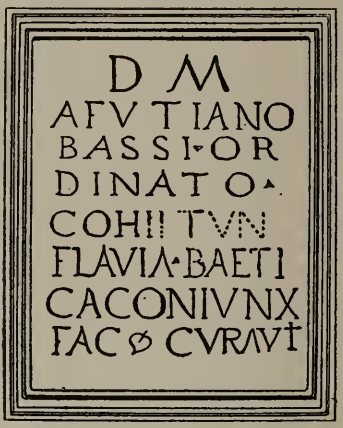

Fig. 3. Scale $\frac{1}{12}$.

We may expand thus:—*D(is) M(anibus) [sacrum]. Afutiano Bassi, ordinato Coh(ortis) II. Tun(grorum), Flavia Baetica, conjunx fac(iendum) curavit; i.e.*, "(Sacred) to the Divine Manes. To Afutianus, (son of) Bassus, centurion in the Second Cohort of Tungrians, his wife, Flavia Baetica, caused this to be erected."

The slab is interesting as the only relic we have of the Birrens cemetery. The spot where it was found has unfortunately not been recorded. But this monument and a fragment of another, now lost, seen by Pennant along with it, can have been but a small part of a class of lapidary records with which Birrens would have enriched us had the clue afforded by their discovery been followed up. A search, even yet, for the spot might amply repay the cost. There is some evidence in favour of the supposition that the cemetery was situated to the west of the station proper. As its discovery would almost certainly be of importance, it is permissible to hope that, at some future time and under suitable arrangements, an attempt may be made to find it.

10. "Found at the station at Burrens" (Pennant); seen by Pennant at Hoddam Castle in 1772; "in the collection of Charles

Kirkpatrick Sharpe, Esq." (Wilson, *Prehist., Ann. of Scot.*, 1st ed., 1851); "deposited in the Museum of the University of Edinburgh" (Stuart, *Cal. Rom.*, 2nd ed., 1852); deposited by the Senatus of the University in the National Museum, Edinburgh, 1866.

An altar, 4½ ft. high and 1 ft. 6 in. broad. The symbol ∞ at the commencement of the last line is regarded as a graphic alteration of the Greek letter Chi used to represent a thousand by the Chalcidian colonists of Southern Italy. There are heavy mouldings on the base and pedestals of this altar. The top is not hollowed out as in most of the other Birrens altars; but its sides, cylindrical in form, are connected by a notched or undulating broad border, the enclosed space being occupied by a flat rectangular focus. It is dedicated to Fortune. Pennant has not copied the inscription with much care, and an expansion of it in two lines is what he gives.

FORTVNAE
COH . I .
NERVANA
GERMANOR
∞ . EQ .

Expand thus: *Fortunae Coh(ors) I. Nervana Germanor(um) milliaria eq(uitata)* [*dedicavit*]; and translate: "To Fortune, the First Cohort of Germany, (called) the Nervana, a thousand strong including its complement of cavalry, (dedicated this)."

The epithet MIL (*iaria*) was applied to those cohorts that numbered about 1000 men. They were called EQ(*uitata*) when they contained a certain number of horse, the proportion generally being 760 foot soldiers formed into 10 centuries and 240 horse in 10 *turmae*. Bodies of troops of this mixed character, the composition of which the Romans are said to have borrowed from the Germans, "were particularly well adapted for the garrisoning of a station situated in an open country, and liable to frequent inroads of the enemy." *

A difference of opinion exists as to the meaning of the epithet *Nervana*. Some are of opinion that it has reference to the emperor Nerva as being the first to organise the cohort. Others think that it was so named because it had been levied among the Nervii, one of the bravest tribes of Belgic Gaul.

11. "Found near the Roman encampment on Burnswark Hill, Dumfriesshire, parish of Hoddam or Middlebie" (*Archæologia*

*Thomas Hodgson, *Archæologia Æliana* (1st series), vol. ii. p. 83.

Scotica, vol. iii., Appendix, p. 92); presented to the Society of Antiquaries of Scotland by Dr (afterwards Sir) David Brewster in 1810, and since in the National Museum, Edinburgh.

'IAP''

A head sculptured in bas-relief, beneath which are some letters of an inscription, two of them complete, the rest incomplete. The stone is 11 in. by 9 in.

The statement in the *Archæologia* conveys at first sight the idea that this piece of sculpture was found on Birrenswark Hill. It must, however, be borne in mind that Birrens and Birrenswark were, and still are, very frequently confounded. "Burnswark [*i.e.*, Birrenswark] Hill" is in Hoddam parish, but Birrens is in Middlebie. In the printed catalogue of the Museum the head is said to be "from Birrens," and there can hardly be a doubt that this is correct.

12. (Fig. 4.) Dug up by Mr Clow of Land in 1810 on the west of the station proper. For many years after 1813 the pedestal of a sun-dial at Burnfoot House; in a recess in the lobby there (1896).

A highly-ornamented altar, 4 ft. 2 in. in height and 1 ft. 10 in. in breadth. Narrow beadings enclose the inscription, which is further separated from panels on the base and capital by heavy mouldings. On the upper panel are two dolphins, a concentric ring, and two birds; on the lower, two dolphins and one bird. On the top are two volutes with rosettes on their ends and a crescent in the space between them. A bason-shaped projection occupies the central portion of the top. Sculptured on the sides are festoons of ivy leaves. The letters of the inscription, though of different sizes, are all distinctly formed. The significance of the C.L at the end of the fifth line gave rise at first to many conjectures; but the letters are now taken as standing for *Civium Latinorum*, probably because it is difficult to say what else they can mean.

DEAE
MINERVAE
COH . II . TVN
GRORVM
MIL . EQ . C . L .
CVI PRÆEST . C . SIL
AVSPEX . PRÆF

Expanding, we have:—*Deae Minervae* [*sacrum*]. *Coh*(*ors*) *II. Tungrorum mil*(*iaria*) *eq*(*uitata*), *c*(*ivium*) *L*(*atinorum*), *cui praeest C. Sil*(*vius*) *Auspex*, *Praef*(*ectus*), [*fecit*]; *i.e.*, "(Sacred) to the goddess Minerva. The Second Cohort of Tungrians, a thousand strong, of which a due proportion is cavalry, and in possession of

the privilege of Latin citizenship, under the command of their Prefect, Caius Silvius Auspex, (erected this)."

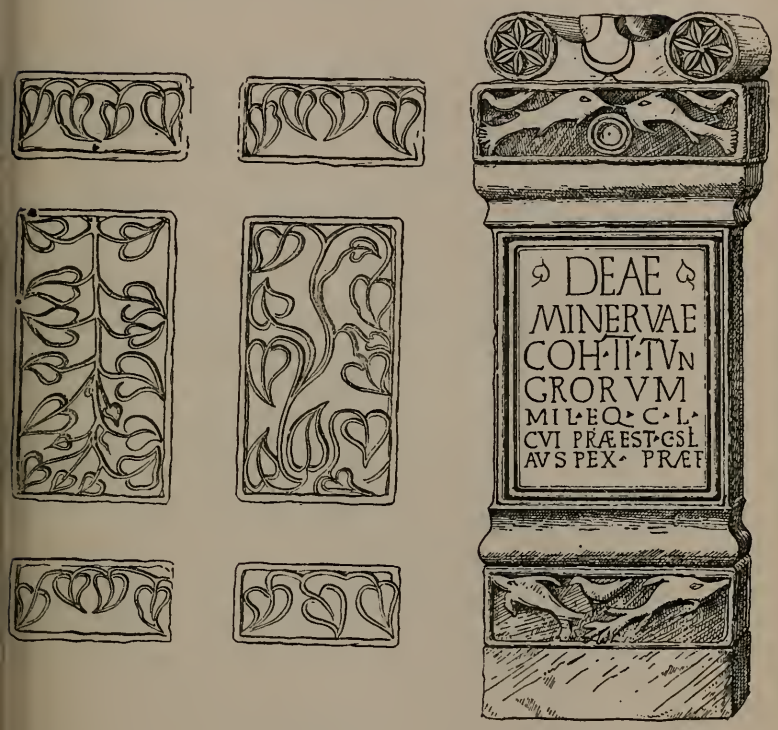

Fig. 4. Scale $\frac{1}{16}$.

This altar was first described in the *Dumfries and Galloway Courier* for August 26th (with woodcut) and Sept. 7th, 1813. It is also the subject of a communication from A.I.K., "New Kent Road," London, in the *Gentleman's Magazine* for June, 1832. But it was only on the publication of Wilson's *Prehistoric Annals of Scotland* in 1851 that it attracted general attention.

13. Probably dug up near the same place as No. 12, date uncertain; in the garden of the farm-house of Land (1896).

A fragment of an inscribed stone, 16 in. high by $10\frac{1}{2}$ in. broad. Of the breadth there appears to be nearly one-half left; how much of the length is uncertain. Only four letters of the inscription remain. The stone seems to have been a small votive altar slab, sacred to MA . . . , probably either *Marti Victori* or *Matribus*.

MA
SA

14. "Found about the year 1812 at Birrens," and "in the collection of C. K. Sharpe, Esq." (Wilson, *Prehist. Ann. of Scotland*, 1st ed., 1851); deposited in the Museum of the University of Edinburgh" (Stuart, *Cal. Rom.*, 2nd ed., 1852); deposited by the Senatus of the University in the National Museum, Edinburgh, in 1866.

A much ornamented and solid-looking altar, 4 ft. 7 in. high and 2 ft. 6 in. broad at the top. Well-marked mouldings divide the central portion from the base and pedestal. Next to these at the top and bottom are panelled spaces, filled with leaf-work of the same character as in No. 12. On the top are two volutes with a bason-shaped projection between them. The C. RAETI of the inscription is explained as *Cives Raeti*, that is, soldiers levied in Raetia, now the south-east of Germany.

MARTI ET VICTO
RIAE . AVG . C . RAE
TI MILIT . IN COH
II TVNGR . CVI .
PRAEEST SILVIVS
AVSPEX - PRAEF.
V . S . L . M

Expanding and translating, we have:—*Marti et Victoriae Augustae* [*sacrum*]. *C*(*ives*) *Raeti milit*(*antes*) *in coh*(*orte*) *II. Tungr* (*orum*) *cui praeest Silvius Auspex*, *Praef*(*ectus*), [*fecerunt*]. *V*(*otum*) *s*(*olverunt*) *l*(*ibentes*) *m*(*erito*); *i.e.*, "(Sacred) to Mars and Victoria the August. Raetian citizens, serving in the second cohort of Tungrians, commanded by Silvius Auspex, the Prefect, (erected this). They performed their vow willingly, deservedly."

15. Same recent history as No. 14.

An altar 3 ft. $7\frac{3}{4}$ in. high and 1 ft. $11\frac{3}{4}$ in. broad. Above the inscription are four mouldings, alternately square and round; and below are two of the same kind. The top is similar to that of No. 14.

DEAE RICAGM
BEDAE PAGVS
VELLAVS MILIT
COH II TVNG
V S L M

Like the two at Hoddam Castle, this altar is dedicated to a foreign deity, Ricagambeda, of whom nothing is known. Expanding, we read:—*Deae Ricag*(*a*)*mbedae* [*sacrum*]. *Pagus Vellaus milit*(*ans*) *Coh*(*orte*) *II. Tung*(*rorum*) [*fecit*]. *V*(*otum*) *s*(*olvit*) *l*(*ibens*) *m*(*erito*).

"(Sacred) to the goddess Ricagambeda. The Vellavian district (=soldiers from that district) serving in the Second Cohort of Tungrians (erected this). They performed their vow willingly, deservedly."

16. Same recent history as Nos. 14 and 15.

A votive altar, 3 ft. high and 1 ft. $2\frac{5}{8}$ in. broad. The inscribed space is inclosed within a beading of cable pattern. Below the beginning and end of the last line are two crescents. On the top are two plain volutes with a "focus" between them. *Dibus* for *deis* is frequently met with on Roman inscribed stones.

DIB . DE
AB . Q .
OMNIB
FRVMENT
IVS MIL . COH II .
TVNGR .

The expansion and translation are as follows:—*Dib(us) deab(us) q(ue) omnib(us)* [*sacrum*]. *Frumentius mil(es) Coh(ortis) II. Tungr(orum)* [*fecit*]. "(Sacred) to all the gods and goddesses. Frumentius, a soldier of the Second Cohort of Tungrians, (erected this)."

17. "Dug up in 1814 in a small vicinal camp on the banks of the Kirtle, near Springkell" (Irvine MS., in library of the Society of Antiquaries of Scotland).

An altar dedicated to Jupiter, now apparently lost. Springkell is distant from Birrens about three miles, and the altar might easily have been carried from it to the spot where it was found in various ways. But there is no absolute certainty of this. The inscription is too imperfect to be intelligible.

18. "A stone taken out of the heart of the wall of the church at Hoddam, Dumfriesshire, when thrown down (in 1815) for the purpose of building a new one" (Irvine MS.); since built into the porch wall of the present church, where it still is (1896).

It is a plain stone, 4 ft. 2 in. high and 1 ft. $8\frac{1}{2}$ in. broad, without any ornament or moulding. This is the second stone found in Dumfriesshire that marks the presence of the first cohort "called the Nervana."

I O M
COH . I . NERVANA
GERMANOR . ∝ . EQ
CVI PRAEEST L . FÆNI
VS FELIX TRIB

The parish of Hoddam consists of three parishes united—Hoddam, Luce, and Ecclefechan—which were thrown into one about the middle of the seventeenth century. The present church is distant from

Birrens 3½ miles, and occupies the site of the structure pulled down in 1815. It is by no means improbable that part of the materials for the latter may have been brought from Birrens. On the other hand, if this was not originally a Birrens stone, then a post on Birrenswark Hill, or some other position in the neighbourhood, must have been held by the cohort for a longer or shorter period.

Expand:—*I(ovi) O(ptimo) M(aximo) [sacrum]. Coh(ors) I. Nervana Germanor(um), miliaria, eq(uitata), cui praeest L. Faenius Felix, trib(unus), [fecit]*; and translate:—"(Sacred) to Jupiter, the best and greatest. The First Cohort of Germans, (called) the Nervana, under the command of L. Fænius Felix, the tribune, (erected this)."

19. Found at Birrens, 1886; preserved at Burnfoot House (1896).

FORTV
NAE VO
T V M

A small altar-shaped stone, 10½ in. by 6 in. In the top is a square depression 2¼ in. wide, possibly intended to receive a small statue of Fortune.

The meaning of the inscription is sufficiently plain.

20. Found in the course of recent excavations at Birrens; in the National Museum, Edinburgh.

LEG . VI . VI

A roughly-dressed stone, 11½ in. by 10½ in. with a short inscription punctured on it in faintly marked letters. It belongs to the class already described as legionary.

Expand:—*Leg(io) VI. Vi(ctrix); i.e.*, "The Sixth Legion, (called) the Victorious."

21. Same recent history as 20.

Part of a small votive slab, which, when entire, had been 1ft. 5 in. broad and 1 ft. 10 in. high.

In all probability the inscription began with the letters I . O . M, on a part of the stone now broken off. What remains of the first of the remaining lines and the beginning of the second suggest that the missing letters of the former are ICHE. Dolichenus was an eastern god widely worshipped in the Roman army during the second and third centuries, and frequently identified with Jupiter.

DOL. . . .
NO SACR
MAGVN
NA VS

Supplementing and expanding, we have: — [I . O . M] *Dol(iche)no sacr(um). Magunna v(otum) s(olvit); i.e.*, "Sacred to (Jupiter) Dol(iche)nus, (the greatest and best). Magunna performed a vow."

22. (Pl. I., fig. 1.) Same recent history as 20 and 21.

Thirteen fragments of a commemorative tablet, discovered within the area of the prætorian buildings. When entire it had measured 4 ft. 6 in. by 2 ft. 3½ in.; and the inscription must have read as follows:—

IMP . CAES . T . AEL HADR
ANTONINO . AVG . P . P . PONT
MAX . TR . POT . XXI* . COS . IIII
COH . II . TVNGR . MIL . EQ . C . L .
SVB . IVL . . . LEG . AVG . PR . PR .

This tablet is particularly valuable, inasmuch as it gives us an exact date, possibly but not necessarily, that at which these buildings were erected. On his accession a Roman emperor was supposed to be invested with the tribunitial power for life; and after each anniversary of this event a year was added in all public documents to the number of those during which he had held the dignity. As Antoninus Pius became emperor A.D. 138, the twenty-first year of his investment with the tribunitial power, in other words, of his reign, was A.D. 158. Another public function usurped by the emperors for life was the presidentship of the College of Priests. The consulship was theirs too, if they cared to hold it; but few of them were at the trouble to do so often. Pius was consul four times—A.D. 138, 139, 140, and 146. COS IIII, "Four times Consul," was therefore applicable to any year between that date and the last of his reign, A.D. 161. The name of the Roman governor of Britain at the time had been on the slab, but, unfortunately, only a few letters of it remain.

It is impossible to say whether this stone is honorary or purely commemorative, marking only time. Either view may be taken. Read in full:—*Imperatore Caesare* [or *Imperatori Caesari*,

* In the Report published in the *Proceedings*, xvi is read instead of xxi. All the fragments of the tablet that were found have now been fixed on a piece of wood of its original size; and a renewed examination, suggested by Mr Haverfield, shows along the line of one of the fractures, distinct traces of the half of a second X. (see Plate).

&c.], *Tito Aelio Hadriano Antonino Augusto* [*Pio*], *Patre Patriae, Pontifice Maximo, tribuniciae potestatis XXI., Consule IV., Cohors II. Tungrorum miliaria, equitata, civium Latinorum, sub Jul . . . Legato Augusti Pro-Praetore* [*posuit*] *; i.e.*, "In the reign of (or in honour of) the Emperor Cæsar Titus Ælius Hadrianus Antoninus Augustus (Pius), Father of his Country, Chief Pontiff, invested with the tribunitial power twenty-one times, four times consul, the Second Cohort of Tungrians, a thousand strong, of which a due proportion is cavalry, and in possession of the privilege of Latin citizenship, (erected this) under Jul . . . . Legate of the Emperor as Governor of Britain."

23. (Pl. II., figs. 1 and 2, and pl. I., fig. 2.) Same recent history as Nos. 20, 21, and 22.

An altar, 3 ft. 2 in. high, 1 ft. 11 in. broad at the top, and 1 ft. 8 in. across the middle in front. The capital is ornamented on all four sides by a narrow cornice of fretwork and two mouldings, the higher of which is rounded and projects over the lower. To these succeed three lines of delicately carved work, which are interrupted in front by pillars that support what appears to be the roof of a domed building. On the top are volutes enriched with rosettes, and on a projection between the volutes a patera-like depression. A patera with an ornate handle is sculptured on the right side of the altar, and a sacrificial axe and knife on the left. An enlarged view of the top is given on pl. I., fig. 2.

DISCIP.
AVG.
COH . II .
TVNGR .
MIL . EQ . C . L .

The altar is dedicated to the disciplinary severity of the emperor, adored as a divine attribute. This honour appears to have been first paid to Hadrian.

Expand:—*Discip*(*linae*) *Aug*(*usti*) *Coh*(*ors*) *II. Tungr*(*orum*), *mil*(*iaria*), *eq*(*uitata*), *c*(*ivium*) *L*(*atinorum*) [*posuit*] *i.e.*—"To the Discipline of the Emperor, the second Cohort of Tungrians, a thousand strong, with a due proportion of cavalry, and in possession of the privilege of Latin citizens (erected this)."

At some time the altar had been thrown into a well in the prætorian buildings, where it remained till discovered in the course of the recent excavations.

24. (Pl. II., fig. 3.) Same recent history as 20, 21, 22, and 23.

An altar of very chaste design, 3 ft. high, 1 ft. 8½ in. broad at the base, and 1 ft. across the middle. At the top on each side are volutes that have six lance-shaped thunderbolts laid closely on them in two sets of three each. Between them is the usual bason-shaped depression. The altar bears no inscription. It was found lying on the steps leading down to a paved rectangular depression within the prætorian buildings.

In the list of Birrens antiquities recorded by Pennant (*Tour in Scotland*, vol. iii., Appendix, p. 407), as "found at the station at Burrens," are four inscribed stones that have not been included in the present list. All of them belong for certain to the north of England. As Pennant's third volume was not published till some years after his visit to the station, it is not difficult to understand how his note-book may have so far misled him. (See *Proc. Soc. of Antiq. of Scot.*, vol. xxxi., p. 150.)

Such is an outline of the records furnished by archæology for a history of the Birrens garrison. They are necessarily fragmentary, but they present us with some facts of importance. Unfortunately, from no other quarter can the slightest help be got in any attempt we may make to connect them; unless, indeed, they can be grouped round the *Blatum Bulgium* of the Antonine Itinerary. But this, though highly probable, is not absolutely certain. The work so called is generally regarded as a compilation drawn up in the reign, and by order, of one or other of the emperors that bore the name of Antoninus. Some indeed give it an earlier date, and trace it to a survey of the empire undertaken in the consulship of Julius Cæsar and M. Antonius (B.C. 44), by command of the former. If this is so, it could not have included at first the Britannic Iters, which must in that case be an addition made in the course of some of the revisions it bears internal evidence of having undergone at various times, down at least to the reign of Diocletian (A.D. 285-305), so as to bring it up to date. Whatever its history may be, the Itinerary is a document of great value, inasmuch as it indicates the course of the principal roads and cross roads throughout the whole empire by the names of places and stations situated on them, all the distances between towns being given in Roman miles. Of fifteen Britannic Iters the Second, which is the longest, runs in very zig-zag fashion from *Rutupiae* (now Richborough, in Kent)

to *Luguvallium* (Carlisle), by way of *Viroconium* (Wroxeter, near Shrewsbury) and *Eburacum* (York). From *Luguvallium* it is continued for 12 miles to *Castra Exploratorum* (usually identified with Netherby), and for other 12 to *Blatum Bulgium* (apparently Birrens), where it stops. Another Iter, the First, also reaches the north on the other side of the island, and strikes the line of the Wall at *Corstopitum* (Corbridge, on the Tyne), whence it proceeds to *Bremenium* (High Rochester), a distance of 20 miles. It deserves, however, to be noted that there is no mention of the Southern Wall or the stations on it, or of *Habitancium* (Risingham), a station nearly midway between *Corstopitum* and *Bremenium*.

We are on firmer ground when we pass on to inquire how early Birrens was a Roman station. A date is fixed for us by the tablet found in the prætorian buildings, which was set up there in the year A.D. 158, the twenty-first of the reign of Antoninus Pius. It does not, of course, follow that this was the year in which the station was either founded or completed. It may be so; but all that can be affirmed for certain is that it was then held in force by Roman auxiliary troops. The Disciplina altar certainly points back to the preceding emperor, Hadrian, whose regulations for all ranks in his army were exceedingly strict, and several of whose coins bear in consequence the legend, *Disciplina Augusti*. It is true that the same legend is found on some of the coins, probably early ones, of Pius. But this may be accounted for by the supposition that the severity which marked the discipline of Hadrian was continued by the heads of the army for years after his presence no longer inspired it. It is not so likely, however, that this severity would be singled out as an attribute of the mild Pius, specially worthy of adoration; although this is possible. We may thus confidently place the erection of the altar between A.D. 117 and A.D. 158.

Whatever was the case in later times, Birrens appears to have been at first an advanced position, intended to guard the approach to the Southern or Lower Isthmus against the Caledonian foe. Its proximity to the line which Hadrian made the northern *Limes* of the Roman province of Britain, its resemblance in plan to *Cilurnum* (Chesters) and other stations on that boundary line, and its early date, all lead to this conclusion. Along with *Castra Exploratorum* it served the same purpose on the west as *Habit-*

ancium and *Bremenium* on the east. Whether it was used as a basis for carrying on operations beyond, is another and a different question. The fact that both the northern Iters extended but a short distance north of the wall is significant. The Romans certainly pushed their arms much further, even beyond the Vallum raised by Lollius Urbicus, the Prætor of Pius, across the Upper or Forth and Clyde Isthmus. But so far as there is any evidence bearing on the point it goes to shew that they generally advanced northwards, having York as their headquarters, and taking an easterly rather than a westerly route. Moreover, it would seem as if they looked upon the territory between the Walls as a protectorate rather than an integral part of the empire, subject to its administrative rules. It was the policy of Hadrian and some of his successors to strengthen the more exposed frontiers by cultivating friendly relations with the neighbouring tribes, who thus became first exposed to attack. Such an arrangement would be the more easily effected for the frontier of the province of Britain, if, as is possible, racial differences and antipathies could be utilised for the purpose.* At all events, by accepting this view of the relation of the Romans to the country north of the Southern Wall, several difficulties disappear, and we need feel no surprise that the official Iters seem to end somewhat abruptly.

During the occupation of Birrens by the Romans its garrison, so far as we can judge from the evidence before us, was mainly composed of the Second Cohort of Tungrians, a people of Germanic origin that had settled in Gaul, and whose name survives in the modern Tongres, or Tongern, in the province of Limberg, Belgium. The First Cohort of Germans, called "Nervana," or a portion of it, was there for a short time, as well as a detachment, likely a small one, of the Sixth Legion. The fact that foreign auxiliaries constituted so large a proportion of the defenders of Birrens accounts for so many of the altars being dedicated to unknown divinities, such as Harimella. Brigantia was probably a native deity worshipped by the Brigantes, a powerful tribe in possession of the greater part of the north of England at the time of the Roman invasion.

To the question, how long the Romans occupied Birrens, the inscribed stones, in the absence of dates, give no answer. All

* See Map of Britain, "showing the relative positions of its chief peoples during the Roman occupation," in Prof. Rhys's *Celtic Britain*.

the more important of them appear to belong to the second century, and are well cut. It is impossible to say whether the seeming degeneracy of others is due to less skilled workmanship or to their being of later date. Some information on this point, as will be afterwards seen, may be gathered from the interior buildings.

24th April, 1896.

Mr JAMES BARBOUR in the chair.

New Members.—Mrs Matthew Jamieson; Mr James M'Cargo, Kirkpatrick-Durham; Mr Wm. Sanders, Rosebank, Lockerbie; Colonel Patrick Sanderson, Glenlaggan, Parton; and Mr Alex. Scott, Erkinholme, Langholm.

Donations.—Mr Andson presented some communion tokens from the Rev. Mr Scott, of Sanquhar, and also some meteorological observations taken by Mr Elliot, gardener, at Warmanbie and Kinmount. Mr Adam J. Corrie presented the catalogue of the Loan Exhibition held at Hastings. The Proceedings of the Society of Antiquaries of Scotland for 1894-5, and the Jack Rabbits of the United States (from the U.S. Department of Agriculture).

Exhibits.—Miss Hannay exhibited a violet obtained by Mr Scott-Elliot at Ruwenzori at a height of 11,000 feet. Mr Robert Barbour exhibited a beautiful skeleton leaf.

COMMUNICATIONS.

I.—*Meteorological Observations taken by Mr Elliot at Warmanbie.* By the Rev. WM. ANDSON.

The following table shows the means of temperature, rainfall, and barometer for each year during the period 1866 to 1881 (omitting 1874, for which the observations were not complete). The observations were taken with great regularity by Mr Elliot, gardener, and by means of reliable instruments. The self-registering thermometers were protected by a screen, and placed 3 feet above the grass. (Makers, Negretti & Zambra,

London.) The barometer was a Fitzroy. Elevation above sea-level, 100 feet. Distance from Solway, 3 miles.

Years.	Mean max.	Mean min.	Mean in year.	Highest in year.	Lowest in year.	Range.	Rainfall.	Days in which it fell.	Barom.
	deg.	deg.	deg.	deg.	deg.	deg	inches.		inches.
1866	56·9	38·4	47·4	88·5	13	75·5	41·416	201	
1867	55·1	41·4	46·7	85·7	00	85·7	34·999	146	29·89
1868	57·4	41·4	48·5	92·5	21	71 5	43·512	200	29 87
1869	57·1	39·5	47·8	87	12	75	38·937	180	29·91
1870	56 6	38	46	89	10	79	30·181	144	29·97
1871	56·6	39·4	47·2	83·5	13	70 5	38·841	185	29·89
1872	56·8	41·4	48 1	84	20	64	53·708	214	29·71
1873	56·9	39 5	47 1	88·2	13 2	75	38·049	170	29·87
1875	56·9	40·2	47·7	85	20	65	36·139	169	29·92
1876	55·7	38 2	46·1	94	11	83	37·970	153	29·89
1877	55·6	39 8	46·9	88·2	12	76·2	55·235	212	29·78
1878	56·7	39·2	46·9	90·2	1	89·2	33·685	145	29·92
1879	53·9	36 3	44	82	5	77	37·206	142	29·88
1880	56·6	39·2	46·9	85	14	71	33·419	155	29·88
1881	54·4	37·1	44·3	85·5	00	85·5	38·893	161	29 85
Mean of 15 years.	55·5	39·3	46 8	94	zero.	76·2	39·483	172	29·87

Monthly means on average of 15 years :—

Month.	Mean Maximum.	Mean Minimum.	Mean of Month.	Rainfall.	Days it fell.
	Degrees.	Degrees.	Degrees.	Inches.	
January ..	42 4	30·5	34·6	3·950	17
February ..	45·1	33·5	38·9	3·450	16
March ..	49·3	32·1	39 8	2·411	13
April ..	56·1	36 8	45·4	2·103	11
May ..	62·4	40 5	49·8	2·522	12
June ..	70·7	46·9	56·8	3·103	13
July ..	70·9	50 8	59·5	3·429	15
August ..	70·1	49·7	58·2	3·786	15
September	64·	45·7	53·8	4·252	16
October ..	54·	39·4	47·	3·864	15
November	46·8	33·5	39·5	3·315	14
December	42·1	30·1	36·	3·538	15

From these tables it appears that the mean annual temperature at Warmanbie during the years specified ranged from 44 deg. in 1879, to 48·5 deg. in 1868, giving a mean of 46·8 deg., which is lower than that of Dumfries by nearly 1 deg., a difference which may be partly explained by the greater elevation of the former place, and by the circumstance that the height of the thermometer above the grass was 3 feet, instead of 4 feet, as at Dumfries. The barometrical prepare very nearly corresponds with the Dumfries average. The average rainfall is about two and a half inches in excess of that of Dumfries, 39·483 in., as compared with 36·86 in. It is right to bear in mind, however, that the periods compared are different. There is a considerable variation in the annual

amounts recorded. In 1870 it was as low as 30·181 in., while in 1877 it reached the large total of 55·235 in., and in 1872 53·708 in. It is only what might be expected when we find that these were the years in which the mean barometrical pressure was the lowest, although in point of temperature they were decidedly above the average. In these years the number of rainy days greatly exceeded the average. The mean over the whole period was 172, while in 1872 it was 214, and in 1877 it was 212. In 1872 the excess was chiefly in the month of January, June, July, August, September, and October, indicating a very rainy summer and harvest. In 1877, again, there was a similar excess in January, which was repeated in July and August, and in October and November. The warmest years of the period were those of 1868, with an annual mean of 48·5 deg., and 1872, with a mean of of 48·1 deg.; and the coldest occurred in 1879, with a mean of 44 deg., and in 1881—mean, 44·3. The observations do not record any temperature below zero, and only twice—in 1867 and 1881—did the protected thermometer fall to that point. From the table of monthly means it appears that the warmest month was July. It had the highest mean maximum, the highest mean minimum, and also the highest monthly mean, viz., 59·5 deg. The next highest was August, with a mean of 58·2 deg; and the next June, with 56·8 deg. The coldest month was January, with a mean of 34·6 deg.; and the next December, mean, 36 deg. The extreme range of temperature was from 94 deg. in 1876 to zero in 1867 and again in 1881. The mean annual range was 76·2 deg. The driest month was April, with a mean of 2·103 in., and 11 days on which rain fell; and March and May came next in point of dryness, with 12 and 13 days of rainfall. The wettest month was September, with a mean of 4·252 in.; but January and October did not fall much short, with 16 and 17 days of rainfall.

II.—*Report on the Herbarium.* By Mr GEORGE F. SCOTT-ELLIOT, B.Sc., F.L.S.

During 1894 and part of 1893 and 1895, it has not been possible for me to pay the amount of attention to the increase of the Herbarium which I should have wished. During my absence the work has been, however, most thoroughly carried on by Miss Hannay and her sister, Miss Jane. The total of plants now repre-

sented (I mean species, not specimens) is about 1375, which form a large proportion of the British flora. In fact, the condition of the Herbarium raises Dumfries to a position only inferior to Edinburgh and Glasgow, though it is possible we have not quite so good a collection as Perth. This matter ought to afford the Society a great deal of gratification. But it is a matter of great regret both to the Misses Hannay and myself that, with material such as scarcely one county town in England possesses, a very slight attempt has been made to use material which has been collected. The botanists of the district are still at work, and continue to assist us, but they do not consult the Herbarium habitually and regularly as I could have wished. This is, no doubt, largely due to the fact of its existence being unknown to many, but perhaps chiefly to its residing in a private house during winter. It is a matter of regret to me that some means should not be found of placing the Herbarium where it can be admired and advertise itself. On its being thoroughly known will follow two results—first, its use by a greater number, and, second, its receiving additions from strangers visiting the district.

The first addition I shall mention is one which may be the to first raise it from a county town collection to one on a much higher level. Mr Wylie, a native of Moffat, now residing at Durban, Natal, wrote to Miss Hannay, and sent by the same mail a parcel of thirty-six Natal ferns, asking for British species in return. After my own little experience, I believe that such exchange could be carried out on an enormous scale, for there is no county in Great Britain whose natives are so generally prevalent throughout the world as Dumfriesshire. It rests, however, with the Society to decide as to whether this idea should be carried out.

Besides Mr Wylie's plants we have thirty-six rare British specimens from London, but without any clear address, so that they have not been acknowledged. Mr P. Gray has sent us a dozen varieties; Mr J. M'Andrew a very interesting set of eighteen species. Mr A. Somervile has sent us thirty interesting forms, and our local friends, including Miss Hannay, continue to supply us with additions.

There are also in the herbarium specimens of mosses, hepatics, fungi, algæ, &c., mostly from the county, which are a nucleus for those who will undertake the cryptogamy of Dumfriesshire. Immediately after the Flora had gone to press, I received the

following varieties from Mr G. Bell, of Lockerbie, who is an extremely acute botanist:—

Potentilla procumbens—very rare.

Euphorbia dulcis—a new record for the county.

Elatine hexandra—a new record, if more specimens will prove the plant as really being this rare species.

Scrophularia vernalis—A confirmation of an old record of great interest, as showing that the plant has spread from Hoddam Castle to Wamphray.

Misses Hannay have given me the following additional localities of rare plants for 1895 and 1896:—

Draba verna—walls near Maxwelltown Station, April; Lincluden, March, 1896.

Arabis Thaliana—abundant on railway banks from Glasgow Road bridge to Maxwelltown Station, May.

Cerastium arvense—on railway banks at Maxwelltown Loch, Castle-Douglas Road, near Bridge, April.

Barbarea vulgaris—along railway bank, Maxwelltown Station, May.

Alliaria officinalis—roadside, Dalskairth to Drumsleet School, May.

Viola palustris—Maxwelltown Loch, abundant, April.

Veronica serpyllifolia—In meadows, Maxwelltown Loch, May.

Menyanthes trifoliata—Maxwelltown Loch, May

Veronica hederifolia—Hedgebank, Dalbeattie Road, April.

Chrysosplenium alternifolium—Cluden, near White Bridge and Glen, April

Prunus padus—wood above Dalskairth, May.

Saxifraga granulata—Lincluden, May.

Stellaria nemorum—Dalskairth, Lincluden, May.

Solanum dulcamara—Garlieston, July.

Veronica anagallis—Garlieston, June.

Lythrum salicaria—wood below Glencaple, July.

Lysimachia vulgaris—Birrenswark, July.

Scutellaria galericulata—Birrenswark, July.

Epilobium roseum—Birrenswark, July.

Geranium pratense—abundant roadsides, Penpont, July.

The state of the specimens is most satisfactory, and point to the extreme care and patient labour which the Misses Hannay

continue to spend upon it. The thanks of the Society are certainly due to these ladies for their careful guardianship of the collection.

10*th April*, 1896.

III.—*The Glenkens in the Olden Times.* By Mr James Barbour, of Dalry.

The Glenkens, or valley of the river Ken, lies in the north of Kirkcudbrightshire, and extends from New-Galloway Railway Station on the south to Ayrshire on the north, and from the river Dee on the west to Dumfriesshire on the east. It is 28 miles from north to south, and 18 miles from east to west. The height above sea level is about 120 feet at head of Loch Ken and 2688 feet on Corserine, the highest hill in the Glenkens. It is one of the most beautiful valleys in the south of Scotland. Except a *fringe* of cultivated land on each side of the Ken it is wholly pastoral—consequently its primitive condition is the more easily ascertained. The parishes of Balmaclellan and Dalry lie on the east side of the Ken, and Kells and Carsphairn on the west side.

When the Romans entered Galloway about A.D. 80 they found the country covered with wood except the exposed soilless summits of the rocks and low marshy spots where wood would not grow. The trees in the Glenkens were principally oak, ash, birch, alder, and rowan-tree or mountain ash. There would also be an undergrowth of hazel and thorns, both white and black, in some places, as may be seen now in patches and clumps of old natural wood at Gairloch, Tannoch, Forest, on the banks of Garroch and Knocknarling and Garpol Burns, and at several other places. There had also been thickets of fir trees, an instance of which is seen at the foot of Loch Dungeon, where the water has washed the soil from the roots. Where peats are cut in deep moss the spade goes through numerous branches of birch and hazel with the nuts still retaining their shape. Trunks of large oak trees are found with the wood yet quite hard. Often on the highest hills, where no improvements have been attempted, the roots of large oak trees are yet to be seen. In no part of the south of Scotland can those old relics of bygone ages be traced so well as among the hills of Kells and Minnigaff. Those forests were stocked with wild cattle, horses, the *urus*—an animal

resembling a bull but much larger—deer, swine, wolves, and foxes, besides numerous smaller animals. The wild fowls which are still to be found on the hills, being then undisturbed, were more numerous and more daring than now. Eagles and ptarmigan are now extinct.

The rivers and streams abounded with various kinds of fishes; but few were caught and eaten by the natives. Many reptiles, now exterminated, infested the morasses and woods, and prodigious swarms of insects were yearly generated.

The original inhabitants of the Glenkens were a tribe called the Selgovae. Their language was Gaelic, which is said to have been spoken by some of the inhabitants so late as 1688. The great majority of the place-names are Gaelic—Irish Gaelic—which was probably the language spoken by the Scots who came from the north of Ireland and conquered and settled in Galloway about A.D. 410. The original inhabitants were large, robust, and well formed. They excelled in running, wrestling, and swimming, and were very courageous. They wore little or no clothing, but dyed their skins so as to represent figures of beasts. They sometimes smeared their bodies with clay, probably as a defence against the bites of insects. Those were fortunate who had the skin of an animal to tie round their shoulders in winter. They retreated in winter into caves and thickets of wood, and in summer they lived in round houses constructed by a circle of stakes being driven into the ground and interwoven with brushwood. The fire was in the middle of the floor, and fires continued to be made on the floor in very many houses until within the last hundred years. The last one was allowed to fall into decay only two years ago, but a beautiful representation of it was painted by your townsman, Mr M'Lellan Arnott. In common with the ancient inhabitants of Britain, their religion was Druidism. Their sacred places were either in recesses of the woods or at circles of stones, and after the introduction of Christianity churches were in many instances erected at those sacred places. The word cell or kell in Gaelic signifies a retreat or recess, hence the name Kells; and Clauchan (Dalry), a collection or circle of stones.

In connection with the Druids, there is still to be seen on the farm of Lochrenny, in the parish of Dalry, a stone five inches in diameter, with a hole through it, which was used in their marriage

ceremonies. There are similar druidical stones to be found in Orkney.

The only Roman remains to be found in the Glenkens is a portion of the so-called Roman road that led from Ayr to Kirkcudbright. This line of road can still be easily traced from Dalmellington till opposite Dalry Village, where it merges into the present public road to Kirkcudbright. That portion of it from Ayr to Dalmellington was carefully surveyed and examined by Dr Macdonald, late of Kelvinside College, Glasgow, who found at least *some* of the characteristics of a Roman road in it. That portion in the Glenkens was in regular use until 1800, when a more level road was made. It is about 15 feet broad, whereas the old native roads are only tracks 6 or 7 feet in width. It has strongly-built culverts, whereas the native roads have only fords over the small streams, and on the whole there seems little doubt it was at least widened and repaired by the Romans. Old roads marked on the Ordnance Maps as Roman can easily be traced on the farm of Altrye, in Dalry, and at Holm of Dalquhairn, in Carsphairn. This line of road evidently came from Dumfries, as it goes through the farm of Shinnelhead, in the parish of Tynron, and enters Dalry parish on the top of Altrye hill at the watershed between the two counties, 1700 feet above sea level. That road joined the old road near Dalmellington, and so led on to Ayr. Dr Macdonald and I examined that road in July, 1894, where marked on the map as a Roman road; but we found neither kerb stones nor pavement, or anything to indicate that it was Roman. The shepherds called it a Cadger's road.

There are at least three distinct moraines in the Glenkens; one a little way up the stream that feeds Loch Dungeon, on the Kells Rhynns. The ice has brought the debris down from the highest point of the hills. There is another by the side of a burn that flows past the steading of Holm of Dalquhairn, which has evidently come from Cairnsmore of Carsphairn, 2635 feet. It forms many knolls or hillocks, which are called the "Alwhanny knowes." Another moraine is at the foot of the "Meaul" of Garryhorn, also in Carsphairn, quite close to Woodhead lead mines. It is called by the shepherds "The lumps."

There is a cairn of large stones on the top of the Kells Rhynns called "The Carlin's Cairn," which has an historical tradition attached to it. It is said that when Robert Bruce was

wandering in disguise among the hills of Kells and Minnigaff in 1306, waiting until his friends raised an army to free the country from the troops of Edward I., he came one evening, wet and weary, to the Mill of Polmaddy and asked hospitality for the night, which was readily granted. Next day English soldiers came searching for Bruce. The miller's wife, who was a clever, capable woman and a true patriot, at once suspecting that the stranger would be Bruce, told the soldiers that no man of that name was there, but that he (Bruce) would be gone on to Lochmaben. After the soldiers left, the miller's wife asked the stranger if he was Bruce. He said he was, but asked to be allowed to remain for a few days longer until he got intelligence of his brother. The miller was *not* told who the stranger was, but was instructed to conceal him among the wheels of the mill if any more soldiers came. After two days more soldiers came, when Bruce was hid among the wheels, and again escaped. When he was crowned King of Scotland the miller's wife gathered together all her friends and neighbours, and had a glorious pic-nic and holiday. They ascended Castlemaddy hill, and on the top built a cairn to commemorate the success of King Robert. The cairn still stands, and is named "The Carlin's Cairn."

There is an excavation on the top of Altrye hill called "the Whig's hole." It is a large hole scooped out of the hill top, capable of holding 100 men, and was much resorted to as a hiding-place during the time of the persecution. The place was so deep that anyone standing in it could not be seen from a distance, but yet had the advantage of seeing an enemy approaching either by the old riding road from Sanquhar or from the valley of the Ken on the other side.

The very oldest public work in Galloway, and consequently in the Glenkens, was the "Deil's Dyke" or "Pict's Wall," which is described as a vast rampart running through Galloway and Nithsdale. It is supposed to have been erected as the boundary between two tribes. Probably it was built by the Scots after they had gained possession of Galloway, to guard against the incursions of the Picts, whom the Scots had driven to the northward. The foundation of the wall was eight feet broad, and it was eight feet high. It is now only seen at intervals among the hills where no alterations have been made. Much of it has been carted away to build dykes, and in several places where I have seen it there was

a resemblance to an old sunk fence. The western end of this wall was on the eastern shore of Loch Ryan, near the site of the ancient Roman station of Rorigoninm (now Innermessan). It then passed through the northern part of Wigtownshire and entered the Stewartry of Kirkcudbright a few miles to the north of Newton-Stewart. It next passed across the parish of Minnigaff, and entered the Glenkens on the farm of Garvary, in the parish of Kells, and passed through the farms of Drumbuie, Clendry, Largmore, Dukieston, Knockreoch, Larg-geerie, Barlae, Dalshangan, near the old Bridge of Deuch at the "Tinkler's lowp;" Marskaig, Auchenshinnoch, and Kerroch, in Dalry. It passed through the parishes of Glencairn, Tynron, and Penpont, and was very entire at Southmains, near Sanquhar. From Southmains it passed down the east side of the Nith, and can be traced to the Hightae flow, through the parish of Annan, and ended at the Solway Firth nearly opposite Bowness in Cumberland, where Hadrian's wall commenced. Another account says that when the Romans withdrew from Britain the northern hordes issued from the woods and mountains and rushed into Valentia plundering the whole country. It was at this time, we have every reason to believe, that the inhabitants of the South of Scotland, with the aid of some foreign residents, raised a wall of protection against those voracious visitors. This rampart, called the "Roman Dyke," the "Pict's Wall," or "Deil's Dyke," seems to have been built of stone in some parts, and in other parts of stone and turf. It had a fosse on one side, and probably a path on the other. The rampart must have been made by a people inhabiting the south side. The remains of this wall have been traced from the shore of Loch Ryan on the west to the north-east boundary of Kirkcudbrightshire. After that it runs into Dumfriesshire, and joins the Britton wall at the Solway Firth. The remains of this old dyke can still be seen at several places in the Glenkens.

The next notable event in order of time was the battle between the Northmen, or Danes, and the Scots on Dalarran Holm some time about A.D. 800. The feeble governments of Denmark and Sweden allowed numerous bands of pirates and robbers to infest the northern shores of Britain. In 787 they first appeared on the coasts of England, and some years afterwards visited the shores of Scotland. After landing and plundering along the shores of the Solway, they reached the Glenkens. Those Danes and the natives met on

a level holm close to the river Ken, two miles south of Dalry, and fully one mile from New Galloway, and there they fought a bloody battle. The Scots were victorious. The Danish sea-king was killed, and was buried where he fell. A tall stone still marks the spot, and stands about 100 yards from the public road. About seventy years ago a little thatched cottage stood beside the stone. I have been in the cottage when a very little boy. One of the lairds of Holme made excavations near the stone, where he found an entire antique sword, which was long preserved in his family. About ninety years ago pieces of rusty armour were frequently turned up by the plough on Dalarran holm.

The events next in order of time are the repeated visits of King James IV. through Dalry on his journeys to the shrine of St. Ninian at Whithorn, where his confessors sent him to do penance for his sins. The church at Dalry was dedicated to St. John, and the place at that time was called St. John's Kirk, and the village St. John's town. Dalry was the name of the parish, and the name *Dal-righ* signifies the king's valley. But in Scottish history the village was named "St. John's Clauchan."

King James, on his journeys from Edinburgh to Whithorn, rode on horseback along with his attendants, as the roads then were only bridle paths. From details of the king's expenditure found in his treasurer's accounts we find that the first mention of his visit to St. John's Kirk was in 1491, when he gave 2s to the priest, and paid 5s for being ferried "ower the water" with his retinue. He next passed through to Whithorn in 1497, when he gave 3s 6d to the "puir folk" and 5s for being ferried over the Ken. Again he passed in 1501, and paid 18s for *belchair* or breakfast and 5s for the ferry. King James passed several times after these dates, but there are no more payments recorded. The ferry mentioned was over a pool in the Ken, still called the "Boat weil," where a ferry boat plied until 1800, when the bridge was built at Allengibbon. I have seen the boatman's house standing and inhabited. The materials were carted away thirty years since to make an addition to Waterside farm-house. The road by which the king rode down to the river is still a public road, and is called by the villagers "the water road." The old kirk was situated low down in the churchyard, and is now converted into a tomb. The present church stands on a bank overlooking the river. The old holy water font is placed by the side of the

entrance to the church. The burial place of the Gordons of Lochinvar and Viscounts of Kenmure is in an old tomb which appears to have been at one time joined to the church. The village at one time is said to have been a furlong from the church, but is now built down to a level with it.

The old inn of Midtown, where the rebellion broke out that resulted in the battle of Rullion Green, in 1666, was at the upper end of the village. The old house has now been taken down, and a new house built in the old courtyard.

In 1629 Sir John Gordon of Lochinvar applied to the Scottish Parliament for authority to erect part of his lands with the houses thereon into a Royal Burgh. It was thought St. John's Clauchan was meant to be the place, but in 1633 the Scottish Parliament granted a charter for the village of Roddings being created a Royal Burgh, as it was more convenient to Kenmure. It was to be called the Burgh of Galloway, now New Galloway, the corporation to consist of a Provost, four Bailies, a Dean of Guild, and twelve Councillors. Its patron died before his design of building the town was fully carried out. A weekly market was, however, established, and a farmers' club, both of which proved of much benefit to the district for many years. An annual cattle show was also established then, which has continued till now, and is said to have been the parent of all the cattle shows in Scotland.

The Forest of Buchan was a royal hunting forest. About the year 1500 it occupied an immense area, including large tracts of land in the parishes of Kells, Carsphairn, and Minnigaff. From Loch Doon it extended to Loch Dee, Loch Trool, and the river Cree. The farms included in the Forest in the parish of Kells were Garvary, Bush, Forest, Darnaw, Dukieston, Knockreoch, Woodhead, Strangassel, Knocknalling, Stranfasket, Burnhead, Largmore, Drumbuie, and Barskeoch. Much of the land included in this area was bare rocky heath; but there were also in it some rich and well-sheltered pastures, and many beautiful glens, the whole abounding with game. As late as 1684 Symson writes—"There are very large red deer, and about the mountain tops the *tarmachan* or ptarmigan, a bird about the size of a grouse cock. Eagles, both grey and black, also bred there." The latest eagle seen among the hills was trapped near Loch Dee about 1860. The limits of the forest gradually contracted, and in the 17th century only the part lying in Minnigaff retained the name of the

Forest of Buchan. Several farms in Kells, however, bear traces of this forest. An extensive sheep farm still bears the name of Forest, and another The Bush. The remains of old woods are still to be seen at Forest, and on the level mossy pastures numerous trees are found lying about two feet below the surface, many of them quite fresh. Polmaddy Mill, which adjoins these farms, was erected to grind grain to feed the Royal hounds, and Castlemaddy was the place where the hounds were kept. Pol-maddy signifies the *burn* of the dogs, and *Castlemaddy*, the strong place of the dogs. This forest was preserved for the exclusive hunting of the Kings of Scotland, and for many years the Earls of Cassilis were rangers, and had charge of it; but in 1628 the then Earl resigned his charge in favour of Sir John Gordon of Lochinvar. Several hunting lodges were kept up in the forest—Hunt-ha', Garvary, Dukieston, and Castlemaddy were favourite places.

James Hepburn, Earl of Bothwell, Queen Mary's third husband, sometimes hunted here. The Queen bestowed an estate on him on the east side of the Ken opposite the forest, and there he built the Castle of Earlston, so called because it was the residence of the Earl. He built it for his hunting lodge, near to a ford where he could cross the Ken. When Queen Mary was deposed Bothwell fled to Orkney and Shetland, and his lands in Galloway were forfeited. In 1586 the estate of Earlston was granted to his nephew, Francis Stewart, Earl of Bothwell. Upon his forfeiture, in 1593, the estate was granted to Andrew, Lord Ochiltree. The Gordons of Lochinvar acquired the estate of Earlston by charter in 1620, and about 1630 it was bestowed on the second son of the then Viscount Kenmure, who was thus sole proprietor. An addition of the east wing was made by William Gordon and his wife, Mary Hope, in 1655, and a stone built into the wall shews the date and initials "W.G., M.H., 1655." The castle itself is still pretty entire, but the offices round the courtyard are in ruins.

The site of the castle of Banck or Lagwine, mentioned in old records, is about a quarter of a mile north of Carsphairn Village. It is said to have been destroyed by fire. It was the residence of the family of M'Adams of Waterhead. John Lowden Macadam, the road improver, was of this family.

The very scanty remains of the Castle of *Kars* or Dundeuch are still to be seen on a level holm by the side of the river Deuch

near its junction with the Ken. It was an important stronghold in the days of Bruce. Afterwards a branch of the family of Gordons of Lochinvar is said to have possessed it.

The remains of an old square tower on an island in Lochinvar —the original home of the Gordons when they came from Berwickshire in 1297—is still to be seen. On a clear day, when the loch is calm, a causeway may be seen below the water—one branch leading to the shore on the east, and another leading to the west shore.

Barscobe Castle, in the parish of Balmaclellan still stands, and is now inhabited by a ploughman's family. It was built in 1648 by a M'Lellan, a relative of the Kirkcudbright M'Lellans who had an estate in Balmaclellan parish. The wife of the builder of the castle was a Gordon of Shirmers.

The remains of the old tower of Shirmers, also in the parish of Balmaclellan, is close to the present farm steading of Shirmers, and near the shore of Loch Ken. It is much crumbled down and covered with ivy. It belonged to a branch of the Gordons of Kenmure, and is supposed to have been destroyed by orders of the Regent Moray after the battle of Langside because the Gordons refused to submit to him.

And now we come to the most important castle in the district —the castle of Kenmure. It is said to have been built by Alan, Lord of Galloway, and that Dervorgilla, his daughter, occasionally lived there with her father. Some think that John Baliol, her son, was born there. A castle was originally built on a low mound close by the head of Loch Ken and to the south of the present castle, but about 1300 it was rebuilt on its present romantic and beautiful site.

The Gordons of Lochinvar came from Berwickshire in 1297, but at that time lived in the castle at Lochinvar. They acquired Kenmure by charter in 1483, and were created Viscounts of Kenmure and Lords of Lochinvar in 1630. Another branch of the Berwickshire Gordons acquired lands in the north of Scotland, from which sprang the Dukes of Richmond and Gordon. After the battle of Langside the Regent Moray summoned Sir John Gordon to submit to him, and sent a party of soldiers into the Glenkens to compel him to do so. The officer left his troop at St. John's Clauchan until he went to Kenmure to get Sir John's answer; but he refused to submit—whereupon the soldiers marched to Kenmure

Castle, and burned and destroyed as much as they could of the castle. They also destroyed the tower of Shirmers, which was the house of one of his friends. The castle still stands, and is inhabited. The portion which was burned and partially thrown down is now repaired. It is beautifully situated on its high and romantic mound, and is approached by a very fine avenue of grand old limes.

At one time there seemed to have been a church on the farm of Bogue in Dalry parish, but there is no mention of it in history. The site of the church or chapel can still be seen—also the foundation of the fence around the churchyard, which enclosed half an acre, as well as the foundation of the walls of the priest's house. A stone was found in the dyke beside the place with "Pope G." rudely carved on it. The field is still named "chapel leys," and the place where the priest's house stood is named the "priests' knowe." The site is marked on the Ordnance Survey maps.

There are three very old bridges still standing and in use in the Glenkens. One is the "Old Bridge of Ken," as it is called, built over the Ken on the line of road between Dalry and Carsphairn on the east side of the Ken. It is six miles from Dalry and four from Carsphairn. It is very narrow, barely allowing one vehicle to pass along at a time. There is also a narrow old bridge over the Garpol Burn at the head of Holme Glen, on the line of what was at one time the high road to Edinburgh. A third old bridge is over Polharrow burn, on the line of the old semi-Roman road from Ayr to Kirkcudbright. It is now widened, and the modern road from Dalry to Carsphairn on the west side of the Ken passes over it. It is said to have been originally built by Quentin M'Lurg, a tailor, whose earnings never exceeded 4d per day. In 1695 a bridge was built over the river Dee near Clatteringshaws, in the parish of Kells, on the old line of road then in use. The place can yet be distinguished a few hundred yards farther up the stream than the present bridge. Before that time the river was often unfordable in winter, and the inhabitants of the country had applied to the Earl of Galloway, Viscount Kenmure, and other influential gentlemen to use their endeavours with the Privy Council of Scotland to have money raised to build a bridge, but they failed to obtain an Act. The Synod of Galloway then took the matter up, and ordered a house-to-house collection to be made in every parish within their jurisdiction. As soon as a

sufficient sum was raised, a bridge was built under the superintendence of the clergy. The present bridge near the place was built in 1811.

STATE OF THE GLENKENS 200 YEARS AGO.

At the time of the Revolution of 1688 the country was in a deplorable condition, after thirty years of cruel tyranny and oppression. The houses in general were miserable hovels, built of stone and turf, or stone with clay for mortar. The fire was on the floor, and the house had a small window on each side opposite the fire-place to let out the smoke as well as to give a little light. On whatever side the wind blew the window on that side was stuffed with straw or old rags. The inhabitants kept their cows in winter tied to stakes in the end of their dwelling-houses, and all entered at the same door, and very often there was no partition between the inmates. Many families had no bedsteads, but slept on mattresses of plaited straw, or a bunch of heather laid down on the floor around the fire. The best farm houses had a living place similar to the above, and in addition another house built parallel, with a paved court between, and which house was called "The Chaumer," and was kept as a parlour and bedroom for guests. It had a fire-place at each end, with sometimes a small grate and sometimes none. I have frequently been in one of those old houses about 1832. The common living house was dark, dirty, and uncomfortable in the extreme. Very often the wall on one side of the house could not be seen from the other side because of smoke and darkness. The earthen floor was always damp and clammy, and on a wet day was especially miserable.

Wooden dishes were used, and at meals they all ate out of one dish. Each person had his own spoon, which was made from a ram's horn. They had neither knives nor forks, but used their fingers instead. The food of the common people was of the meanest and coarsest kind. Those were reckoned well off who got a sufficient quantity of porridge, brose, and sowens, made of very poor grain, dried on the fire in pots, and ground in querns, with greens or kail boiled in salt and water. They seldom tasted animal food, except the carcases of beasts that died of starvation or disease. It was rare to slaughter any animal for provision in winter. Many sheep died in late autumn and early winter from *braxy*, or inflammation, and these they salted up, and hung pieces

of them from the rafters to dry and be smoked. For drink they put up whey into barrels in summer until it fermented. This they mixed with water, and drank after being kept nearly a year. A very little of this quenched their thirst. Tea was then known, but it cost thirty shillings a pound.

The dress of the inhabitants was very rough and homely. The men wore *waulked plaiden* or kelt coats made of a mixture of black and white wool in its natural state. Their hose were made of white plaiden sewed together, and they wore rude single-soled shoes. Their Kilmarnock bonnets were either black or blue. None had hats except the lairds. In general neither men nor women wore shoes except in winter, and their children got none until they could go to church. Shirts they scarcely knew, and those used were of coarse woollen, and seldom changed. The women dressed untidily in coarse gowns, shaped in the most uncouth manuer. Farmers' wives wore toys or hoods of coarse linen when they went from home. When young girls went to church, fairs, or markets they wore linen mutches or caps. At home they went bareheaded, and had their hair snooded back on the crowns of their heads with a string used as a garter.

Agricultural operations were very awkward and inefficient. Ploughs were heavy, and badly made. Both oxen and horses were generally yoked to one plough, perhaps four oxen and two horses. Where no oxen were used four horses were yoked. A woman or a boy was employed to walk backward and lead the animals. One man held the stilts of the plough, and another man, called the *Gadsman*, regulated the depth of the furrow by pressing down or raising up the beam of the plough. Harrows were light and coarsely made. The teeth were of wood hardened by being tied up to the smoky rafters of the dwelling-house, but they required to be often replaced. There were no carts then made. Manure was taken to the fields on cars, or in creels slung over a horse's back. The women also carried out manure on their backs in creels of a smaller size. Corn and hay were conveyed home in trusses on horses' backs, and peats in sacks or creels. Heather was often cut on the hills for firing.

In spring working horses and oxen became so lean and weak from want of sufficient food that they sometimes fell down in the draught. The land was in crop for four successive years, and after that lay four years fallow. The yield was miserably poor,

and the quality of the grain was bad. In unfavourable seasons the inhabitants were reduced to actual starvation.

The price of cattle was very low, as they were generally in such poor condition. In spring, when put to grass they were often so weak that when they lay down they could not rise without assistance, and they frequently fell into bogs and mosses, when neighbours had to be called to help to get them set on firm ground again. After the oat crop appeared above ground in spring cattle and sheep had to be tended during the day, and shut into *folds* or *loans* at night, for there were no division fences. There was scarcely even a march fence between farms, which was frequently the cause of quarrels and lasting animosities between neighbours.

Both men and women, from the hardy way in which they were brought up, were more robust and vigorous than at present, and were not subject to many diseases, but the average duration of life was much shorter.

Saddles and bridles had not come into common use. People rode to church or market on *brechams* or *pillions*, while they put halters made of hair rope on the horses' heads instead of bridles, and put shoes only on their fore feet.

Education was at a very low ebb. Few of the common people could read even the Bible, but the precentor in each congregation read the Scriptures in the church before the minister appeared. The lower classes were very superstitious, and believed in ghosts, fairies, and witches. To preserve their cattle from the effects of witchcraft they put pieces of rowan tree on the walls above the cows' heads when in the house, and tied smaller pieces among the long hair of their tails when out in the fields. At this time roads were in a wretched condition. They were indeed but bridle tracks, and thee were very few bridges in the district.

8th May, 1896.

Mr Philip Sulley, Vice-President, in the chair.

New Members.—Mr Jonathan E. Blacklock, solicitor; the Count of Serra Largo, Cowhill Towers; and Mr Adam Skirving, Croys, Dalbeattie.

Donations.—The Report of the Marlborough College Natural History Society; Report of the Milwaukie Public Museum; the Proceedings of the Academy of Sciences of Philadelphia; the Annals of the New York Academy of Sciences. Mr James Barbour presented a copy of the ground plan of Birrens.

On the motion of Mr Lennox, a special vote of thanks was awarded to Mr James Barbour for his distinguished services as representative of this society in the recent excavations at Birrens; and the thanks of this society were expressed to the Society of Antiquaries of Scotland for conducting and paying for the excavations.

Communications.

I.—*Annotated List of Rarer Plants met with in North-West Dumfriesshire.* By Mr John Corrie, Moniaive.

Early in 1891 I was invited by Mr Scott-Elliot to co-operate with a few other members of the Society in the work of collecting material for a new District Flora. The results of work done prior to, and during, 1891-92 were communicated to Mr Elliot at the time, but a few additional records have since been made, and these, together with my earlier records, may now be submitted in the form of "An annotated list of rarer plants met with in north-west Dumfriesshire."

RANUNCULACEÆ.

Aquilegia vulgaris—probably an escape. Jarbruck Wood, Glencairn, 374 ft.

NYMPHÆACEÆ.

Nuphar intermedium—Stroanshalloch Loch. 1270 ft. First gathered by Mr Fingland.

PAPAVERACEÆ.

Platystemon californicum—recorded 1887. Near Moniaive.

FUMARIACEÆ.

Fumaria officinalis—occurs sparingly. Affects waste margins of cultivated lands.

Corydalis claviculata—not plentiful. Jarbruck, 374 ft; Craigdarroch, 467 ft.

CRUCIFERÆ.

Cochlearia officinalis—Martour, Dibbin, and Conrick Hills, 1600 to 1700 ft.

Hesperis matronalis—new record for Dumfriesshire 1891. Riverside, near Moniaive, and along Cairn.

CISTACEÆ.

Helianthemum vulgare—confined to one or two stations, where it is plentiful. Craigneston, 600 ft.; Bardannoch, 700 ft.

VIOLACEÆ.

Viola odorata—probable escape. Near Moniaive.

DROSERACEÆ.

Drosera intermedia—two stations. Scarce.

CARYOPHYLLACEÆ.

Silene inflata—not uncommon.

Lychnis Githago—not plentiful.

Lychnis vespertina—occurs very sparingly.

Sagina subulata—new record 1891. Castlehill, 700 ft.

MALVACEÆ.

Malva sylvestris—neighbourhood of Moniaive. Probably outcast.

HYPERICACEÆ.

Hypericum humifusum—not common.

GERANIACEÆ.

Geranium phœum—new Dumfriesshire station. Apparently old-established.

Geranium sylvaticum—common.

Geranium pratense—less common.

LIGUMINOSÆ.

Trifolium arvense—dry pasture land west of Moniaive. Not common.

Trifolium striatum—new record. Rare.

ROSACEÆ.

Prunus insititia—not common. Jarbruck Wood, Glencairn.

Spiræa salicifolia—one station only, altitude 400 ft.

Geum intermedium—not uncommon. Twomerkland, 400 ft.; Caitloch, 430 ft.; Dalmakerran, 450.

Rubus saxatilis—sub-alpine glens. Minnygrile, 600 ft.; Glencrosh, 700 ft.

Rubus chamæmorus—new station (1895). North-west border of county, 1700 ft.

Rosa spinosissima—rare inland. Occurs one station.

Agrimonia Eupatoria—frequent. Roadside near Moniaive, 350 ft.; Woodlea, 400 ft.; Glencrosh, 450 ft.

ANAGRACEÆ.

Circæa lutetiana—not common. Woods near Caitloch, 400 ft., and Poundland, Glencairn.

HALORAGIACEÆ.

Hippuris vulgaris—rare. Fingland Lane, 1000 ft.; Trostan Lane (new station 1895).

LYTHRACEÆ.

Lythrum salicaria—not common. Riversides near Moniaive, Loch Urr, &c.

CRASSULACEÆ.

Sedum villosum—not frequent. Bardannoch, 630 ft.; roadside, west of Moniaive, 450 ft.

SAXIFRAGACEÆ.

Saxifraga stellaris—Martour Hill, 1650 ft., a new station.

Saxifraga granulata—margin of river near Moniaive. Only station, 330 ft.

Saxifraga hypnoides—rare. Benbrack, 1800 ft., and Cairnhead, 1700 ft. Both new stations.

UMBELLIFERÆ.

Sanicula Europœa—frequent.

Carum verticillatum—plentiful throughout Glencairn.

Myrrhis odorata—not uncommon.

Oenanthe crocata—not common. Near Moniaive and Maxwelton House.

Meum athamanticum—plentiful but local.

RUBIACEÆ.

Galium cruciata—not common. Roadside near Moniaive.

VALERIANEÆ.

Valeriana pyrenaica—margin of river near Moniaive. New station 1892.

COMPOSITÆ.

Arctium lappa—occurs generally but sparingly.
Centaurea radians—single station, rare.
Tanacetum vulgare—near Moniaive. Probably an escape.
Solidago Virga-aurea—not unfrequent.

CAMPANULACEÆ.

Campanula latifolia—not common.
Lobelia Dortmanna—rare. Loch Urr.

ERICACEÆ.

Vaccinium Vitis-Idæa—rare. Trostan Hill, 1250 ft.

APOCYNACEÆ.

Vinca minor—one station.

GENTIANACEÆ.

Gentiana campestris—not common. Old hill pastures, 500 to 600 ft.
Menyanthes trifoliata—not common. Girharrow, 800 ft.; Loch Urr, 700 ft.

CONVOLVULACEÆ.

Convolvulus sepium—Riverside near Moniaive.

SOLANACEÆ.

Solanum Dulcamara—Not frequent. Backwater marsh on Cairn, 330 ft.; Brookside, near Maxwelton, plentiful.

SCROPHULARIACEA.

Linaria vulgaris—fields and roadsides near Moniaive. Not common.
Mimulus luteus—Naturalised escape or outcast, rapidly becoming common.

LABIATÆ.

Scutellaria galericulata—two stations. Loch Urr and opposite Maxwelton.
Goleopsis versicolor—not unfrequent.

PLANTAGINEÆ.

Plantago maritima—not common inland. Occurs along western border; 600 ft.

BORAGINACEÆ.

Symphytum officinale—frequent.

LENTIBULARIACEA.

Utricularia neglecta—recorded 1891. New to Scotland. ("Scottish Naturalist," 1891.)

Utricularia intermedia—not common. Rare in flower. New Dumfriesshire record. 1887.

Utricularia minor—new Dumfriesshire record 1890. Several stations along western border.

POLYGONACEÆ.

Polygonum Bistorta—three stations, all new.

Polygonum amphibium—one station.

Polygonum minor—Loch Urr. First gathered by Mr T. Brown, 1891.

EMPETRACEÆ.

Empetrum nigrum—frequent, but scarce in fruit.

SALICACEÆ.

Salix pentandra—rare. Three stations male flowers, one station female flowers.

Salix repens—rare. Single station.

ORCHIDACEÆ.

Habenaria viridis—not common.

Habenaria albida—not common.

Listera ovata—frequent.

Malaxis paludosa—new record for county. 1887. Rare.

ARACEÆ

Arum maculatum—recorded 1887. Jarbruck Woods. Doubtfully indigenous. Mr M'Andrew informs me that his Senwick Wood station is in the neighbourhood of ruins, and the same thing occurs with my Dumfriesshire station.

TYPHACEÆ.

Sparganium minimum—Fingland Lane, 1000 ft.

Sparganium ramosum—frequent.

CYPERACEÆ.

Carex dioica—Girharrow, Glencairn. Not common.
C. pulicaris—generally distributed.
C. pauciflora—rare. Girharrow and Loch Urr.
C. ovalis—common.
C. stellulata—common.
C. curta—frequent.
C. remota—not common. Dalmakerran, Woodlea, Caitloch All new stations.
C. paniculata—rare. Fingland Lane, 1000 ft.
C. muricata—frequent.
C. vulgaris—generally distributed.
C. limosa—rare. Stroanshalloch. First gathered by Mr Fingland.
C. irrigua—new record 1887. Rare.
C. glauca—generally distributed.
C. pallescens—generally distributed.
C. panicea—generally distributed.
C. præcox—not uncommon.
C. pilulifera—not uncommon
C. hirta—single station. Rare.
C. filiformis—Girharrow. New Dumfriesshire record Rare.
C. flava—generally distributed.
C. fulva—generally distributed.
C. binervis—frequent.
C. sylvatica—not common. Several new stations recorded; Jarbruck, 400 ft.; Caitloch, 430 ft.; Tynron, 450 ft.
C. vesicaria—not common. Two stations on Cairn.
C. ampullacea—frequent.
C. paludosa—rare. Recorded for two new stations—Ingleston, near Moniaive, and neighbourhood of Maxwelton.

FILICES.

Ceterach officinarum—rare. Recorded for new Dumfriesshire station, where it is plentiful. 220 ft.
Polypodium vulgare—common.
P. phegopteris—not uncommon.
P. dryopteris—not uncommon.
Allosorus crispus—not plentiful. Four stations, 700 to 1000 ft.

Cystopteris fragilis—rare in Glencairn. New station, Glenjaun Hill, 1400 ft.
Polystichum aculeatum—generally distributed.
Lastræa, Oreopteris—generally distributed.
L. Filix-mas—generally distributed.
L. dilatata—generally distributed.
Athyrium felix fœmina—generally distributed.
Asplenium Trichomanes—generally distributed.
A. Adiantum nigrum—not common. Minnygrile, 650 ft.; Crechan, 520 ft.
A. ruta muraria—not common. Two stations.
Scolopendrium vulgare—rare throughout Glencairn. Single specimens occasionally met with.
Blechnum boreale—generally distributed.
Pteris aquilina—generally distributed.
Hymenophyllum Wilsoni—rare. Recorded for three new stations—Glenjaun, 1000 ft.; Glencrosh, 700 ft.; Benbuie, 700 ft.
Botrychium lunaria—frequent, 300 to 800 ft.
Ophioglossum vulgatum—rare. Recorded for three new stations, from one of which it has now disappeared—Caitloch, 600 ft.; Dalmakerran (Tynron), 770.

LYCOPODIACEÆ.

Lycopodium clavatum—not common. Girbarrow, Loch Urr, &c.
L. Selago—not common. Caitloch, near Holmhead, &c.
Selaginella selaginoides—not uncommon.

Note.—This list is obviously incomplete. Some of the more critical orders and genera are omitted altogether; others are only partially represented. Carices and Filices, it will be noticed, receive exceptional treatment. All forms known to occur, common as well as uncommon, are included.

II.—*The Battle of Dornock.* By Mr George Neilson (Glasgow).

The year 1333 began with peace between England and Scotland—nominal peace only, for Edward III. was directly or indirectly aiding the efforts of Edward Balliol towards the Scottish throne, which he had occupied for a part of the previous year. In the early months of 1333 there was truce betwixt the two

countries. As usual, it was the mutual aggressiveness of the borderers that occasioned a renewal of the war. Whilst Edward III. was preparing his proclamation[1] denouncing the Scots for a rupture of the peace, Sir Archibald Douglas on Monday, 22nd March, was making a flying raid[2] into Gilsland, where he ravaged the lands of Sir Ralf Dacre, lord of Naworth and keeper of Carlisle Castle. Measures of reprisal were promptly taken. On the Wednesday[3] following, the 24th, Sir Antony Lucy, leading a strong body of English marchmen, entered Scotland. His force is variously stated by the three early historians[4] who deal with the expedition. The chronicle of Lanercost calls it merely a powerful body; Hemingburgh states it at 800 men; and Knyghton follows him in giving the same figure. William of Lochmaben, probably from his name a renegade Scot, was with the Englishmen, who marched twelve miles inland. The new moon had set in[5] on the 16th, so that there must have been moonlight all through the night of the 24th and far into the morning. This, of course, enabled them the better to effect their entry and achieve their purpose, which was not war so much as plunder. By next day they had scoured over an area computed at 12 leagues, and with a large booty, consisting of a great many head of cattle, they were with all possible despatch making their way back to bonnie Carlisle.

In raids of this kind it is obvious that the sooner the cattle could be got across the firth the better. The course they apparently took has a most interesting bearing on the history of the

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[1] *Foedera*, 23rd March, 1333.

[2] *Lanercost Chron.*, 272; *Knyghton* in *Decem. Scriptores*, 2562.

[3] The editor of the *Lanercost Chronicle* misdated it 23rd March. The text says it was on the vigil of the Annunciation. But as the Annunciation was 25th March, the vigil was on the 24th.

[4] *Lanercost* and *Knyghton*, where above cited. *Hemingburgh* (Eng. Hist. Soc.), ii., 307. See also *Bower's Scotichronicon*, ii., 310.

[5] For this calculation I am indebted to my friend Mr Arch. A. Young. By Nicholas's *Chronology of History* I made out the date of the new moon to have been the 20th, but I am assured the lunar table given in that work is erroneous. Mr Young's calculation is explicitly confirmed by an amended Lunar Calendar, framed by Mr A. V. Gough of Chilton Thorn Vicarage, Fence Houses, County Durham, which he has with much courtesy put at my service in manuscript.

fords. There were three chief historic crossing places—one, the Solway or Sulwath proper, near the junction of Sark and Kirtle; another from Dornock to Drumburgh; and the third from Annan to Bowness. The second of these fords is known to have been used by the army of Edward I. during its retiral from Scotland in the autumn of 1300. On 30th August Edward was at "Drunnok."[1] On 1st September he was at "Drumbou."[2] He and his army had probably crossed the day before,[3] and the wardrobe accounts contain items relative to the destruction of corn at "Drunnok" and "Drumbou" at that time.[4] It was this ford, available, of course, only at ebb,[5] that Sir Antony Lucy made his objective. The reason for his choice is not hard to find. The forayers must have been in parties at considerable distances apart to enable them to cover the area said to have been overrun. The Dornock ford would be a good central meeting place, offering the most convenient and direct route to England. Had the invaders chosen to make for the eastmost ford of Solway there would have been a grave loss of time; the cattle would have had to be driven five or six miles further; and time was a first consideration. But even as it was Sir Antony did not succeed in crossing without having to fight.

The alarm had reached Lochmaben Castle, then under the command of William of Douglas, afterwards known to history with a chequered fame as the Knight of Liddesdale. He put himself at the head of a detachment of the garrison to the number of about fifty men, spoken of as well armed.[6] Associated with him were several local knights, Sir Humphrey Boys, Sir Humphrey Jardine (called Sardyne in one edition of one chronicle!),[7] and William Carlyle. Another person named as taking special part in the affair was William Barde—referred to as Warde by one author. These leaders appear all to share the epithet flung at them by the Lanercost chronicler of "solemn malefactors" whatever that may mean. Besides the fifty men-at-arms the whole

[1] *Lib. Quot., Garderob.* 172, 175.
[2] *Ib.*, 126, 172, 198, 200. Drumbou is now Drumburgh.
[3] *Ib.*, 165, 173, 174, 196.
[4] *Ib.*, 126.
[5] *Statistical Account*, Dumfriesshire, 257
[6] *Lanercost Chron.*, 272.
[7] *Decem Scrip.*, 2563.

available force of the country-side, "the flower of the soldiery of all Annandale," as Bower[1] puts it, was mustered under Douglas's command.

Probably there was no great difficulty in divining the road the Englishmen were going to take. At anyrate, when they reached the ford Douglas was there too. A smart engagement was the result, fought "near the vill of Drunnok at the Sandy wathe."[2]

It is from the mention of the "wath" that I have been led to draw my inferences regarding the intention of the Englishmen to return into England by it. The battle was fought on Thursday. 25th March, about three o'clock in the afternoon—*circa horam nonam*. A friend who has been good enough to compute the tides for me calculates that at that time, or a short while before, it was ebb, and the ford passable. The plan of the conductors of the expedition doubtless was to reach the ford at low water. The Scots, however, were at the ford as soon as they: the retiral was intercepted: battle was inevitable.

The Scots made a sharp attack. By one account it would seem that they had a particular animosity against the captain of the invading expeditiou, and "fell with one accord and with one shout upon the person of Sir Antony." But as the friar of Carlisle says—he who wrote the chronicle of Lanercost—"Thanks to God and the stout help of the young men" the two Scottish knights, Boys and Jardine, were slain and 24 men-at-arms with them. Hemingburgh represents that the casualties greatly exceeded this number. He adds William Carlyle to the list of dead, saying that 160 men were slain. Knyghton states the slaughtered Scots at 140. Baird and Douglas were captured with, says Hemingburgh, about 100 others. The rest were put to flight—base flight, of course, the Englishmen called it.

On the English side it is recorded that only two esquires fell. These were Thomas of Plumland and John of Ormesby, the latter of whom had long been a thorn in the flesh to the Scots.[3] Their bodies, borne to Carlisle on horseback, were honourably buried

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[1] *Bower*, ii., 310.

[2] *Juxta villam de Drunnok apud Sandywathe.*—Lanercost Chron., 272.

[3] *Qui semper ante fuerat stimulus in oculis Scoticorum.*—Lanercost Chron., 273.

there. The English captain, Sir Antony, was himself badly wounded in the foot, eye, and hand, but after a while he completely recovered.

The official record of the battle closes somewhat dolefully for our side with the letter[1] addressed from Pontefract by King Edward III. to Sir Ralf Dacre, constable of Carlisle, commanding that William Douglas and William Barde should be kept safely ironed and in prison. The Sheriff of Cumberland was at the same time to proclaim that the several captors of Scotsmen should keep their respective prisoners secure. Barde was still a captive three years later. Douglas's exact term of confinement has not been ascertained, but Bower says it endured for two years. The flower of Annandale soldiery had been nipped in its early bloom. And, unfortunately, as Wyntoun notes in his brief record of the event, the misfortune was only the "arles" of more—the earnest of worse things, in especial of the evil day of Halidon.[2]

That ilke tyme at Lowchmabane
Off Anandyrdale the floure wes tane
With off the West Marche men
That had thame in till Ingland then.
Amang thaim Willame off Dowglas
Takyn and had till presowne was.
This was bot erlys for to tell
Off infortwne that efftyr fell.

Bower, above cited, also mistakenly places the engagement at Lochmaben.

III.—*Recent Excavations at Birrens—The Interior Buildings.* By JAMES BARBOUR, F.S.A.

The council of this Society having brought under the notice of the council of the Society of Antiquaries of Scotland the desirableness of having excavations made at Birrens, that body promptly took up the suggestion, and appointed a committee of superintendence, on which the writer represented the local Society, and made other necessary arrangements. Operations were begun on 29th May, 1895, and were carried on for a period of nearly nine months. Important information resulted regarding the structure of the fortifications and the plan of the interior buildings; and altars, inscribed stones, pottery, and other objects

[1] *Foedera*, 28th March, 1333; *Bain's Cal.*, iii., 1074.
[2] *Wyntoun's Cronykil*, viii., 27.

of interest were recovered, a full account of all which is contained in *The Proceedings of the Society of Antiquaries*, vol. xxxi. This paper on *The Interior Buildings* follows, with some alterations, the one by the writer on the same subject contained in the volume above mentioned.

The results of the excavations in the interior of the station were somewhat unexpected and remarkable, for the slightly irregular sward covered at a greater or less depth the foundations of a whole military town. Long ago all of the buildings above ground had been pulled down and carried away for modern uses, but Nature, as if appreciating the situation, century after century, unceasingly created mould, which, at every fresh spoilation, was cast as a protecting covering over the place; and so remains of considerable extent and interest have been preserved.

Great part of the foundations of the buildings remain, and a few fragments of upper walling. At many places, however, the masonry is quite gone, or so disturbed as to be hardly distinguishable from debris.

Two circumstances proved of material assistance in following out the plan. All, or nearly all, the trenches remained open while the survey was in progress. In this way the well-defined lines were serviceable in ascertaining the trend of those less certain. And where no masonry was left, the position in which it had stood was often clearly evidenced by a peculiar method afterwards described, which had been applied in preparing for the reception of the foundations.

Many of the division walls were not traced, and all the doors, windows, and other such details are wanting. The outlines of the several buildings, however, have been ascertained, almost to completeness, and the general disposition of the station is fully displayed.

On the plan, plate Ia., the walling actually exposed is indicated by black tinting, its continuation in the spaces between the openings being marked in diagonal hatching. It has been found that work of two distinct periods exist; and the secondary, as far as opened, except where it covers the primary, is indicated by square hatching. Secondary work, however, as will afterwards appear, exists to a greater extent than it has been found convenient to indicate on the plan. The diamond hatching shows the position of walls, of which little or no remains exist. The

lines, however, are conjectural only to a very limited extent, as in every instance evidence more or less conclusive of the situation occupied was found.

The buildings with their intervening streets form a rectangular block, measuring 500 feet from north to south, and 300 from east to west; and the interior of the station when complete would extend to about 4 acres.

A principal street crosses the station from the east gateway to the west, dividing it into two unequal parts, embracing respectively two-fifths and three-fifths of the area. Another leads from the north gateway to the south end, and marks the station longitudinally into two equal and almost uniformly arranged divisions. This street is divided at the centre of the station by a building, supposed to be the praetorium (XII. on plate Ia.), round which it is carried, one-half on either side. The building in this way stands out separately.

No minor streets are found in the southern division, but eavesdrops intervene between the different blocks of buildings. In the north division three subsidiary streets run from the east side to the west; and eavesdrops alternate with these.

The buildings appear to be grouped according to the several purposes they were intended to serve; and those conjectured to be meant for administrative and other more special ends occupy the main street between the east and west gateways. The praetorium is the most prominent, and probably also the most interesting. The walls are 2 feet 10 inches thick, strengthened with buttresses. In the south one is the entrance gateway, which shows the seats of the scuntions, and two stone-posts for stopping the gate. This leads into an open court, floored with characteristic irregular polygonal pieces of stone fitted together, and provided with a drain all round for carrying off the surface water. At the west side of the court is the public well, 18 feet deep and 4 feet 4 inches diameter, yielding water for the supply of the station. It is built of dressed stones in regular courses, and the bottom is paved with cobbles over a bed of well-tempered clay. On the east and west sides of the court was a narrow apartment, and on the north a verandah, supported on slender pillars of wood or iron, and an arcade of seven bays behind it, had extended across the building from east to west. Remains, partly *in situ*, partly in fragments lying on the pavement, prove that square piers, with

splayed bases and moulded caps, had separated the bays, and that they were spanned with arches, closed with thin projecting keystones.

Passing through the centre bay, which is a little wider than the others, a full width space is reached, and communicating with it at the north end of the building is a series of chambers, five in number. In the floor of the centre one is a pit 5 feet deep, approached by descending steps. The walls are formed of large stone flags set on end, and remains seem to indicate that a parapet, finished with a moulded cope clamped with a continuous bar of iron, rose above the floor. Some grain and a quantity of fragments of window glass were found in it. The floor of the chamber west of the central one shows a square sinking about 3 inches deep, in the centre of which some kind of pedestal has stood, and the surrounding pavement is worn with use, mostly at one side. The two flanking chambers of the row also show square blank spaces in the centre of the flag floors.

Comparing this building with the corresponding one shown on the plan of Chesters, and named the Forum in Dr Bruce's *Hand-Book to the Roman Wall*, it is found that the same number and arrangement of chambers obtains in both, and only in one respect is there any material difference. At Chesters the aspect is towards the north; here it is southwards.

The next building eastwards (XIII.) is enclosed by walling 2 feet 6 inches thick, strengthened with buttresses, but no division walls were found, and it and those numbered IX. and X. do not present any particular distinguishing features.

No. XIV. is the bath. There is a hypocaust, with pillars for supporting the floor, a furnace door, air duct, flue, and drains, and a well for the supply of water. The well is four feet square at the bottom and 12 feet deep, and it widens out somewhat at the top, becoming nearly circular on plan. The walls are rudely built of undressed stones over a square oak frame. The remains of an oak ladder, chips of pottery, and some shoe leather were found in it.

Nos. XI. and XV. are peculiar. The narrow form, the great thickness of the walls (3 feet 8 inches), and the numerous heavy buttresses exhibited, leave little room for doubt that the buildings were spanned by vaulted stone roofs. The floors were raised on walls, with air ducts between them. A quantity of calcined wheat

was found in No. XI., and the buildings probably served the purpose of food stores.

The opposite frontage is wholly occupied by two large buildings, numbered respectively IV. and VIII. on the plan. The latter is peculiar, inasmuch as it exhibits partition walls separating the area into house-like apartments. Unfortunately, owing to the lines being incomplete and the want of indications of doorways, the connection of the several spaces is not clear. The former (IV.), judging by its dimensions and general character, would appear to have been one of the most important buildings in the station. The only exterior wall of which substantial remains exist is the front one. It is of superior workmanship, 2 feet 10 inches thick, and buttressed. There were fifteen heavy buttresses towards the street, each showing a projecting base, finished with splayed and neatly hewn top course (plate IIIA.); a thick wall, crossing it from north to south, divided the building in the centre; and the floor was raised high above the ground, and supported on walls forming intervening ducts for the distribution of air, possibly heated, soot being found in them.

The west end of the building recedes a little from the line of the north and south street, forming a sort of square, just in front of the praetorium. In this recess there is a stone plat, measuring 5 feet each way, and raised a step above the level of the street. At one place it is much worn, as if by the movement of the feet—the mark, it may be, where the sentinel in charge of the standard stood.

Other buildings in the station may be classed in three groups. One embraces the large blocks I., II., and III. in the south-east area, stretching between the longitudinal street and the east rampart. So far as has been discovered, these were undivided. Being separated only by eavesdrops 2 feet 6 inches in width, the doorways would, it may be presumed, be in the end walls, and whatever light there was would probably be admitted at the roof. Another group consists of corresponding buildings V., VI., and VII. in the south-west space. They are differentiated by longitudinal division walls, one in each. All the buildings in the north part of the camp, XVI. to XXIX., comprise the third group. The northmost, east and west of the longitudinal street, appear in some respects to be exceptional, but the others exhibit uniformity. These are very narrow as compared with the buildings in other

parts of the camp, being only 16 feet wide with a length of 136 feet. Each is divided into several apartments; and the cross walls, so far as exposed, indicate much similarity of division. The several blocks are ranged in pairs, back to back, with intervening eavesdrops, and so as to front the streets.

In regard to the condition of the walling, while, as previously mentioned, the masonry is entirely gone at some places, generally the footings, consisting of one or two courses of stones, remain, much of the work being in fair condition, although in part disturbed and broken. A few pieces rise to a greater height, as part of the front wall of No. IV., with the buttresses and dwarf walls, and fragments of Nos. XII., XIV., and XV., which show three and four courses; and the north wall of XI., the highest, rises eight courses of stones above the foundation.

The walls, as before indicated, belong to two distinct periods. Evidently the original buildings had been destroyed and razed. "There shall not be left one stone upon another that shall not be thrown down" represents something like what appears to have happened over at least a great part of the area; and the place continued waste for a lengthened interval, until the earth accumulated and covered out of sight the underground footings, which escaped. When occupation again took place, the buildings were reared of new. A large proportion at least of the old foundations were left unsearched for and unused, and the new walls were run up, of inferior workmanship, upon the accumulated soil. Over great part of the north-east and north-west sections, and at some other places also, footings of both the primary and the secondary walls remain, the latter being sometimes over the former, or partly so, but more commonly, one runs alongside the other. Much of the walling, however, cannot be discriminated as belonging to one class or the other; and on this account, and as the lines sometimes coincide, the general tints on the plan probably embrace a considerable proportion of secondary work, which it has not been possible to show in its proper colour.

In the course of the erection of the secondary buildings, or afterwards, a few variations of the arrangements appear to have been effected. Such, probably, are the narrow apartments on either side of the court of the praetorium, the blocking in several of the openings of the arcade, and the central enclosure in the space behind the arcade, square hatched on the plan. The secondary wall-

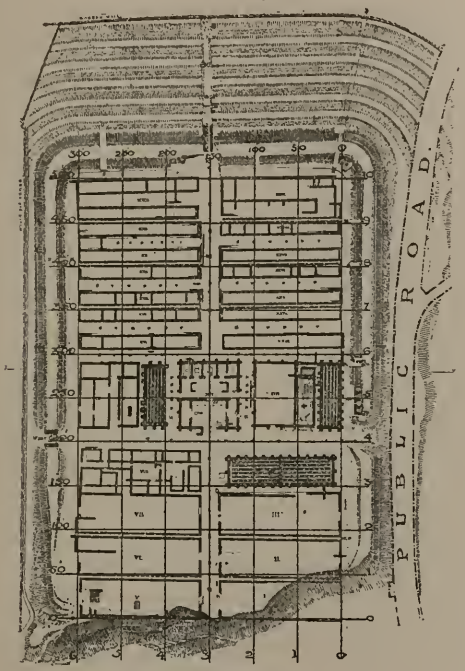
ing of the bath, indicated by square hatching, stands on the original foundations, except the piece overlapping the building on the west, which it is evident must be a departure from the original. The walls blocking some of the subsidiary streets probably represent changes also. Nevertheless, the reconstruction works appear to have proceeded practically according to the old lines ; and it is remarkable, considering that the primary footings in the north parts of the camp were undiscovered, that the secondary buildings rose up of the same form and dimension as before, and in point of situation varied only to the extent of the thickness of the wall or less—a circumstance which seems to imply that the station was probably a fixed and constant type.

It will be observed that the plan is strikingly compact. The south-east and south-west sections, but for the narrow eavesdrops, present each a solid covering of buildings. In the central section, excepting the passages on either side of the praetorium, the buildings are almost solid, and being turned endways towards the street, frontage is economised. The north sections are less closely built, but nowhere is there redundancy of space; and the ovens near the east gateway, previously described, and other structures admitting of it, which must otherwise have encroached on the interior, were embedded in the body of the rampart.

The plan is characterised also by symmetry, exemplified in the uniformity and balancing of the parts. It is believed, and on good grounds, that the Romans rested the proportion of their edifices, not only as regards the elevation and sections, but the plan also, on the *square;* and the method would seem to apply to, and explain, the Dumfriesshire station.

If the dimensions of the sides, 500 feet and 300, are bisected in order to obtain major and minor axes, the smallest number of equal divisions applicable to both is found to be ten an dsix respectively (see fig.), and lines extended along and across the plan from these points mark it out into sixty squares. The importance of the squares lies in the coincidence of these and of the lines with the divisions of the camp. The station shows five well-defined sections, separated one from another by the main streets, and it is found that each of them contains twelve of the sixty squares, therefore the areas are exactly equal one with another. Four of them correspond also in form and dimensions. In regard to the lines—No. 3, from the east, the major axis of the

camp, marks the longitudinal street, and passes through the middle of the praetorium; No. 4, from the south, supplies a reason, not otherwise obvious, for the position of the main cross street; No.



5, the minor axis, again passes through the praetorium, proving its central position; and No. 6 marks the street north of the praetorium. Four divisions remain at the north end, balancing a like number at the south. It will be observed also that the lines numbered 7, 8, and 9 so nearly correspond with the eavesdrops, that it seems probable that was intended, thus embracing in every division a subsidiary street, together with the buildings fronting it on either side.

Is it probable that all these coincidences are accidental; or is it not much more likely they are the outcome of design? "Wherever," says Josephus, as quoted by Gordon, "the Romans enter

upon hostile ground, they never think of fighting till they first make their camps, which they do not rear up at a venture, or without rule."

The constructive methods exhibited are interesting, being in many respects in contrast with those now in use. The formation of the streets does not bear out the common conception of a Roman road. Generally, it consists of a thick bed of gravel, hard and well bound together. The crown is well raised, and the gravel formation is retained at either side by means of two courses of stones, laid flat, one over the other; and outside these are the water channels, composed of stones 18 inches broad, and in lengths of 2 feet to 4, having the gutters about 9 inches wide and 4 deep, cut with a square section out of the solid. In the case of the subsidiary streets only one line of gutter, placed at or near the centre of the roadway, is found. At several points continuous channelling of this description, several stones in length, remains *in situ*.

The surfacing of the northward portion of the longitudinal street is different, for, over a similar bed of gravel, it is paved with whinstone cobbles, but the work is much disturbed. At a depth of 12 inches another similar surfacing is found, the cobbles used being somewhat larger. In this case, however, the water-channel is in the centre of the roadway, and is composed of a flag for the bottom, with the sides constructed of stone kerbing. This latter formation rests on forced ground about 18 inches deep; the streets towards the south rest on the natural till.

The water-channels of the higher formation would thus seem, as regards position at least, to be secondary, and it may be that the channelling itself is also to be assigned to that period.

The floor pavements in the station are of several sorts. With in the buildings examples made of squared and dressed freestone flags, such as are in use now, are found. But the most common kind is the irregular polygonal pattern, patches of which are found in all parts of the area. It also is composed of freestone flag, but in small pieces, and the joints, instead of being hewn, are hammer-dressed, so as the pieces may fit together on all sides.

Numerous drains traverse the camp, of various dimensions and depths, but it is not ascertained on what system they are disposed Near the south end of the longitudinal street, one is found 8 feet in depth, measuring from the surface to the bottom. The drain

itself is 3 feet 6 inches high and 16 inches wide, and the sides are built of rubble without mortar. The course of a drain between the east rampart and the adjoining buildings, numbered I., II., III., and IV., is indicated on the plan, and in connection with it there remains *in situ* a curious inlet, consisting of a piece of open channeling similar to that found at the sides of the streets, but of greater breadth, and a built hopper with sloping flag bottom and flag cover (see drawing, plate IIIA.). It is opposite the eavesdrop between Nos. II. and III., and doubtless the channelling would extend the whole length of the eavesdrop, for the purpose of carrying off the water falling from the roofs of the buildings.

A characteristic method of preparing the foundations for the reception of the walls, to which reference has already been made, prevails. A trench is cut in the ground 9 inches deep or more, and of a width a little greater than the thickness of the intended wall, which is filled with well-tempered clay. The surface of the clay is paved with whinstone cobbles, accurately marking out the situation of the walls, even to the width and projection of the buttresses, and the pavement is beat into the clay, the substance being thereby consolidated and rendered suitable for the support of the superincumbent masonry. It is an excellent foundation; and its use, on account of its permanence, proved of much service in tracing out the plan.

The footings usually project, forming scarcements on each side of the wall, but not always; and for the lowest course of stones, and mostly the second also, or what of the wall would be lower than the surface of the ground, instead of lime mortar, clay is used for bedding and jointing. The work is exceedingly good, every crevice closed, and the whole a solid mass. Whether this method was followed with the view of protecting the walls from rising damp, or because it was thought better adapted to the circumstances, the work being in contact with the earth, than lime mortar would be, the result is that now, after the lapse of so many ages, these footings, so built, where undisturbed by force, are yet in perfect order, whereas the lime mortar used in the overwalling has been wholly absorbed by the accumulated soil.

These methods of coustructing the foundations and footings are peculiar to the primary walls.

The walling discriminated as secondary is characterised by inferior workmanship; and the primary parts vary in quality par-

ticularly in respect of the manner of dressing the facing-stones. The materials used are the freestone of the district with lime mortar. Limestone is abundant in the vicinity, and the traces of mortar in the walls, although meagre, sufficiently establish its use. The facing-stones of both sides of the primary walls are headers, squared and arranged in regular courses, generally 6 inches to 7 inches high, and in lengths of 9 to 18 inches, and the centre is closed with stones fitted in between the headers. As showing the excellence of the work, it may be mentioned that in the case of No. IV. even the dwarf walls are so built.

Some specimens of bonding found are typical. One consists of freestone flags about $2\frac{1}{2}$ inches thick laid in the wall, so as to extend across its thickness and form a continuous course in its length. The best example remaining is in the north wall of No. XI., where it forms the seventh course above the foundation (see drawing, plate IIIA.). Bonding bricks appear also to have been used, for, although not found in position, numerous fragments of such are scattered about.

The manner of dressing the stones exhibited is various; generally the inside faces of the walls are scabbled, and in many cases the outside faces are similarly dressed. The dressing of the external face of the front wall of No. IV. is the most characteristic. The stones show diagonal lines forming a reticulated or diamond pattern of half-inch to inch mesh within a chiselled margin. This wall is of superior and artistic workmanship, and the great care bestowed on it is doubtless due to its prominent position in the main street. Appearance being less essential in other localities, less elaborately dressed work is made to suffice.

It now only remains to notice the indications of architectural treatment afforded by the vestiges. That appearance was an element in the design is sufficiently attested by the use of superior and more elaborately dressed masonry in the most prominent situation—the main street. From this, too, it may be deduced that the great display of buttresses, with their splayed and neatly hewn base course, while intended chiefly to secure strength, were probably likewise utilised to promote architectural effect. The arcade of the praetorium already described is an architectural feature, and a variety of fragments remain indicative of the existence of others, and of artistic surroundings.

Only a very few details relating to the buildings have been recovered. The mouldings are sufficiently characteristic of Roman type, but while they are not wanting in boldness, the quirking of the cymatium exhibited is a form inconsistent with the style in its purity. The examples are all single mouldings and of little diversity, but some of them may have been components of an assemblage. Referring to plate IIIa., fig. 7 shows a section of parapet coping worked with quirked cyma and fillet; fig. 9, a door or window rybat, the reveal of which is of ogee form; fig. 10, part of a pier cap, also worked with the quirked cyma; and fig. 11, horizontal and inclined pediment mouldings, the form being again the quirked cyma. These last exhibit sunk soffits, the dressing of which, however, is so dissimilar and inferior to other parts that it seems an afterthought. Probably the cornice, as constituted in the original building, embraced corona and bed-mould, and afterwards, when rebuilding took place, the cymatium was sunk as described, and applied alone.

The altars and other accessories present details more distinctly degenerate. The fragment fig. 20, plate IIIa. shows a sunk moulding; the framing of the historic altablet (fig. 15) is of low relief; and the mouldings of the disciplina altar (figs. 13 and 14), besides being deficient in boldness, are constituted of broken curves. Those of the uninscribed altar, however (figs. 17 and 18), are of better form and proportion. These mouldings, apart from the cavetto of the base of the uninscribed altar, bear a curious degree of resemblance one to another. It will be observed that the cornice mould of the disciplina altar is a repetition of that of the base turned upside down, and in the uninscribed altar the only difference is the absence of the quirking of the base mould.

The accessories are enriched more or less; profusely in some instances. The devices employed are the human figure (plate IIIa., fig. 22); dolphins, birds, leaves and stems of ivy, and the crescent (fig. 4, *Inscribed Stones*); leaves of the oak tree, and thunderbolts (plate II., fig. 3); rosettes of various designs; architectural forms, cabling in variety, and leaves of the laurel (plate IIIa., figs. 21 and 22); sacrificial implements and utensils (plate II. fig. 2); and beltings constituted of peculiar triangular-shaped depressions, the ridges between which form together zigzag lines.

Two belts of these depressions, separated by a sunk beaded astragal, ornament the upper member of the disciplina altar, and a

single line appears on the fragment (fig. 20, plate IIIa.). Fig. 19 presents analogous ornament of a bolder and more complex design; and the pelta (fig. 24) derives its form from depressions somewhat equivalent.

This peculiar form of enrichment, which possesses nothing in common with the more ancient Roman ornamentation, but appears to have been much and widely applied during the decadence of the style, is interesting as containing the germs of some characteristic forms of mediæval decoration. The baluster pillars represented on the disciplina altar also accords with forms found in connection with early mediæval work in this country. Some importance may therefore attach to these meagre details, as reflecting a ray of light amid the semi-darkness which enshrouds the history of the art during the early part of the Christian era. The altars and other accessories of the station appear to belong to a time much later than the date of the historical tablet, unless it is allowed that the period of decadence commenced earlier than is generally supposed. The fragments, nevertheless, exhibit some excellent workmanship. The dressing of the fragment fig. 19, plate IIIa. in particular is an example of deft-handed use of a well-tempered and sharp chisel.

The station appears to have been laid out according to rule, and with a view to symmetry and utility. The structural methods are purposelike; much of the workmanship displays skill, taste, and care; and strength and endurance characterise the buildings, while they were not devoid of architectural design and adornment.

Nothing has been found recognisable as a mason's chisel, but the tooling on the dressed stones and numerous markings formed in sharpening the points afford evidence of their variety.

Of the several branches of building, mason work—the materials of which are the most durable — is best represented with stone-carving, sculpture, and brick-making. All wood work has perished. Iron has proved incomparably less durable than stone, and the remains of such work are only shapeless masses of rusty metal. Slater work is evidenced by a solitary fragment of a roofing tile, and plumber work by a few cuttings of lead. The place has yielded no evidence of plaster work; but the existence of numerous fragments of window-glass speaks of the glazier.

It would seem an omission not to mention, in connection with the constructive and artistic aspects of the station, the names of two architects *(architectus)*, which appear in the paper on the *Inscribed Stones*. One is named "Amandus," and the other "Gamidiahus." Doubtless they were military officers, but architects nevertheless, since Vitruvius himself while an architect held an appointment and had charge of the engines of war, which he describes in his book on architecture. The first owes the preservation of his name to the religion of some one else. The inscription embracing it beneath the figure of Brigantia reads :—"Sacred to Brigantia. Amandus the architect (erected this) by command . . ." It may be inferred from the inscription that he had charge of such works. Through his own piety the name of the other has come down to us. "Sacred to Harmella. Gamidiahus the arc[hitect] performed his vows, willingly, gladly, deservedly."

FIELD MEETINGS.

30th May.—Eskdalemuir.

The start was made first to Lockerbie by rail, when about twenty members turned up to take part in the expedition. At Lockerbie the party was joined by Dr Macdonald, vice-president of the Society of Antiquaries of Scotland, and Mr Cunningham, C.E., its treasurer, who had come from Edinburgh for the purpose. From Lockerbie a large drag was engaged to convey the excursionists to Raeburnfoot, in the immediate vicinity of which the Roman camp is situated. The route taken was up the valley of the Dryfe for a considerable part of the distance. The first object of antiquarian interest which attracted attention was a carved stone over the doorway of a cottage at Berryscaur. This stone was said to have been brought from some old castle in the vicinity, but tradition did not give it a name. There was engraved upon it from left to right first a St. Andrew's Cross, then a holly leaf, and next the Royal Arms of Scotland, followed by the letters A.B. The curious thing about it was that it should have been marked with the Royal Arms, which seemed to point to the castle from which it came having been a residence or hunting lodge of a Scottish king or of some member of the royal family, although this, of course, is only the purest conjecture. The Parish Church of Eskdalemuir was at length—after a drive of nearly three hours—passed; and Raeburnfoot, a short distance beyond, at the junction of the Rae Water with the White Esk, where the ancient camp, which was the object of inquiry, is to be found. It may be mentioned, however, that between these places a monument to one of the martyrs who suffered in the times of the persecution in the 17th century was pointed out. His name was Hyslop, and he is said to have been put to death in 1685 as a follower of the Covenanters. The monument is a plain stone, with the usual inscription, and is said to have been originally erected in 1702, but more than once subsequently renewed. At Raeburnfoot the party

was joined by the Rev. Mr Dick, the minister of the parish, by Mr Bell of Castle O'er, and Mr Beattie of Davington. The tenant of the farm on whose ground the camp is situated happened to be from home on business, but both he and Mrs Scott, the proprietrix, had kindly offered to give every facility for the investigation. It was found that the ground covered by the camp was almost identical in form and extent with the camp at Birrens recently explored—that is, it was square, or rather rectangular, in form, not circular or oval, and measured about 500 feet in length by 300 in breadth. But there was this difference, that the surface, instead of being flat as at Birrens, sloped downwards towards the north or north-east. The rampart could be distinctly traced, and the ditch was said to have been 20 feet wide and 5 feet deep. There was also distinct evidence of a gateway at the south side. The experts present were of opinion that the probability was in favour of its having been a Roman Camp; but in the absence of any positive evidence, such as would be furnished by excavation, and the discovery of relics of Roman occupation, they hesitated to decide the question absolutely. After tarrying here about an hour and a half, the party set out on the return journey by a different route, having been kindly invited by Mr Bell, the proprietor of Castle O'er, to visit a camp on his property. The road taken, so far at least, was that which leads to Langholm by the valley of the White Esk. On the way two Druidical stone circles were pointed out by the driver on the other side of the river, and at some distance from one another, but time did not permit of their being visited. Castle O'er is a fine residence, beautifully situated in the river valley, and about four miles distant from Eskdalemuir. The camp occupies the summit of a hill in the immediate neighbourhood of the house, and, unlike that at Raeburnfoot, is oval in form, and estimated to be about six or seven hundred feet in length by two hundred and fifty to three hundred in breadth. On one side there seem to have been three ramparts with corresponding ditches; but on the other, at the farthest distance from the road, only one, owing apparently to the nature of the ground, which on that side descends more precipitously. This is not supposed to have been a Roman camp, but rather a British. Some authorities speak of it as Saxon, but as no excavations have ever been made, as far as known, the question as to its origin may be regarded as still unsettled. The proprietor pointed out extensive trenches in

the neighbourhood, which he supposed had been connected with the camp. After visiting this interesting spot, the party were hospitably entertained to tea at the mansion house by Mr and Mrs Bell. Before leaving, a meeting of the Society was held under the presidency of Mr Barbour, architect, at which the following new members were proposed and admitted, viz.: Mr Johnson-Ferguson, M.P., of Springkell; Mr Bell of Castle O'er; Mr M'Clure, banker, Lockerbie; Mr Beattie, farmer, Davington; and Dean Hiddleston, Dumfries. On the motion of Mr Murray, very hearty votes of thanks were accorded to Mr and Mrs Bell for their exceedingly kind entertainment of the members of the Society, and to the Rev. Mr Dick and Mr Beattie for information and assistance supplied in carrying out the object of the excursion.

19th September.—Craigenputtock.

The second field meeting was held at Craigenputtock. Various memorials of Thomas Carlyle in the room used by him as a study were inspected.

Messrs W. A. Coats, of Dalscairth; Charles R. Dubs, of Cargen; and Reginald Kirkpatrick Howat, of Mabie, were elected members.

LIST OF MEMBERS.

Honorary Members.

E. G. Baker, F.L.S., British Museum
J. G. Baker, F.R.S., Royal Herbarium, Kew.
Arthur Bennett, F.L.S., Croydon.
J. Harvie Brown, F.L.S., Larbert.
William Carruthers, F.R.S., British Museum.
Frederick R. Coles, Edinburgh.
Dr Anstruther Davidson, Los Angeles.
William Galloway, Whithorn.
Peter Gray, Dumfries.
James Macdonald, LL.D., Edinburgh.
Alexander M'Millan, Castle-Douglas.
Sir Herbert E. Maxwell, Bart., M.P., F.S.A.
Alexander D. Murray (former Secretary), Newcastle
Dr David Sharp, F.R.S., Cambridge.
Robert Hibbert Taylor, M.D., Liverpool.
William Thomson, Kirkcudbright.
Joseph Wilson (former Secretary), Liverpool.

Members.

John Adair, Rotchell Park.
Sir Andrew N. Agnew, Bart., M.A., Lochnaben.
John Carlyle Aitken, Gatehouse.
Miss Margaret Aitken, St. Albans, Maxwelltown,
William Allan, Irving Street.
Rev. William Andson, Newall Terrace.
Joseph J. Armistead, Newabbey.
Samuel Arnott, Carsethorn.
William Barber, M.A., Terreran.
James Barbour, F.S.A., St. Christopher.

Mrs James Barbour, St. Christopher.
James Barbour, Glendarroch, Dalry.
Robert Barbour, Belmont.
Robert Barbour, Solicitor, Rosemount Terrace.
James Beattie, Davington, Langholm.
Richard Bell, Castle O'er, Langholm.
Mrs Bell, Penfillan House, Penpont.
Colonel Edward Blackett, Arbigland.
Jonathan E. Blacklock, Rosemount Terrace.
John Boreland, Auchencairn, Closeburn.
William Bowron, Marchmount.
Thomas M. Brown, Closeburn Castle.
Sir James Crichton-Browne, M.D., LL.D., F.R.S., Crindau.
Alexander Bryson, Irish Street.
Duke of Buccleuch and Queensberry, K.T., Lord-Lieutenant of Dumfriesshire.
Rev. John Cairns, M.A., Ivy Lodge.
Rev. James A. Campbell, Troqueer.
George Campion, B.A., Sheriff-Substitute
James Carmont, Irish Street.
Frank J. C. Carruthers, Architect, Lockerbie.
Rev. Alexander Chapman, M.A., St. Mary's.
Edward J. Chinnock, LL.D., Rector of Dumfries Academy.
Dr Frederick H. Clarke, Buccleuch Street.
W. A. Coats, Dalskairth.
Miss Copland, Newabbey.
John F. Cormack, Lockerbie.
Adam J. Corrie, Senwick, Borgue.
John Corrie, Moniaive.
John J. Cowan, Eliock, Sanquhar.
John M. Crabbie, F.S.A., Duncow.
John Cumming, Albany Lodge.
James Davidson, F.I.C., Summerville.
John Davidson, Crichton Cottages.
Rev. John R. Denham, S. John's.
William Dickie, Laurieknowe.
William A. Dinwiddie, Buccleuch Street.
John W. Dods, St. Mary's Place.
Bernard Drummond, Moffat.
Charles R. Dubs, Cargen.

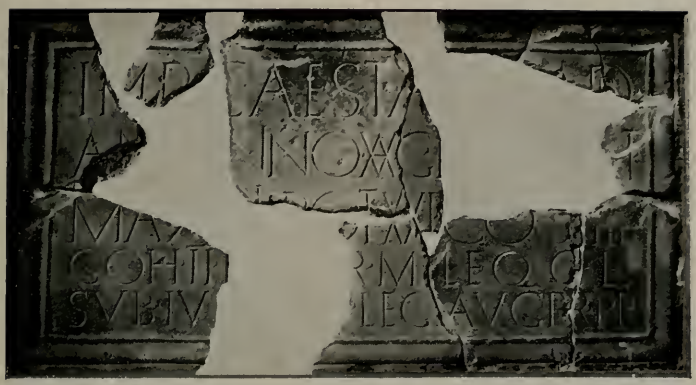
Robert F. Dudgeon, Kirkcudbright.
William Duncan, Rotchell Park.
John H. Edmondson, Riddingwood.
George F. Scott-Elliot, F.R.G.S., F.L.S., Newton.
Mrs Scott-Elliot, Newton.
Captain Robert Cutlar-Fergusson, Craigdarroch.
Joseph Gillon Fergusson, Isle.
James Fingland, Thornhill.
Rev. James Fraser, D.D., Colvend.
Thomas Fraser, High Street, Dalbeattie.
Mrs Gilchrist, Linwood.
Robert Gordon, London.
William M. Graham, Mossknowe.
John Grierson, Town Clerk.
Robert Grierson, Castle-Douglas.
John Gunning, Victoria Road.
Miss Hamilton, Victoria Road.
Miss Hannay, Calder Bank.
Miss Jane Hannay, Calder Bank.
John Henderson, Claremont.
Lord Herries, Lord-Lieutenant of the Stewartry.
Alexander Young Herries, Spottes.
James Herries, Loreburn Park.
James Hiddleston, Dean of Guild, Nithbank.
J. J. Hope-Johnstone, Raehills.
Reginald Kirkpatrick Howat, Mabie.
George Irving, Newcastle.
Matthew Jamieson, Craigelvin.
Mrs Matthew Jamieson, Craigelvin.
David G. Jardine, Applegarth.
J. E. Johnson-Ferguson, M.P., Springkell.
John Thorburn Johnstone, Moffat.
Mrs Johnstone, Victoria Terrace.
Duncan James Kay, Drumpark.
John Kerr, Blountfield, Ruthwell.
Rev. Thomas Kidd, Moniaive.
Rev. Roger Kirkpatrick, B.D., Dalbeattie.
Thomas Laing, Noblehill.
Rev. Sir Emilius Laurie, Bart., M.A., Maxwelton House.
James Lennox, F.S.A., Edenbank.

James M'Andrew, New Galloway.
James M'Call, Caitloch.
James M'Cargo, Kirkpatrick-Durham.
William M'Clure, Lockerbie.
Miss M'Cracken, York Place.
James C. R. Macdonald, M.A., Maryville.
Mrs James H. M'Gowan, Ellangowan.
Thomas M'Gowan, Rotchell.
Colonel Edward Mackenzie, Auchenskeoch.
William D. Mackenzie, Fowley Court, Henley-on-Thames.
Matthew S. M'Kerrow, Boreland, of Southwick.
Thomas C. M'Kettrick, View-Field.
John M'Kie, Anchorlea, Kirkcudbright.
Thomas M'Kie, F.S.A., advocate, Edinburgh.
Miss M'Kie, Moat House.
Rev. John M'Kinnon, Newall Terrace.
Dr James MacLachlan, Lockerbie.
Samuel Macmillan, Moffat.
Alexander Malcolm, Priestlands.
William E. Malcolm, Burnfoot.
Mrs M'Tier, Ladyfield.
Dr J. W. Martin, Holywood.
Wellwood H. Maxwell, F.S.A., Munches.
Wellwood Maxwell, F.S.A., Kirkennan.
William J. Maxwell, M.A., Terraughtie.
William J. Maxwell, Terregles Bank.
William M. Maxwell, Rotchell Park.
Frank Miller, Annan,
Miss Milligan Irish Street.
James Moffat, Annan.
John A. Moodie, Irish Street.
Thomas A. Moryson, Montague Street.
Miss Agnes Mounsey, Thornhill.
Benjamin Rigby Murray, Parton.
Robert Murray, George Street.
Mrs Robert Murray, George Street.
William Murray, M.A., advocate, Murraythwaite.
George Neilson, Glasgow.
John Neilson, M.A., Catherine Street.
John Neilson, Mollance, Castle-Douglas.

John Nicholson, Stapleton Grange.
Walter Ovens, Torr, Auchencairn.
Charles S. Phyn, Procurator-fiscal.
Rev. Patrick M. Playfair, M.A., Glencairn.
John Primrose, Arundel House.
John Proudfoot, Moffat.
Rev. D. Ogilvy Ramsay, D.D., Closeburn.
David W. Rannie, M.A., Conheath.
Frank Reid, St. Catherine's.
Rev. H. M. B. Reid, B.D., Balmaghie.
Sir Robert Threshie 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.
Dr J. M. Robertson, Penpont.
William D. Robinson-Douglas, M.A., F.L.S., Orchardton.
John Robson, Clerk to the County Council.
John K. Rogerson, Gowanlea, Holywood.
Dr James Maxwell Ross, M.A., Victoria Road.
John Rossie, M.D., Newabbey.
James Rutherford, M.D., Crichton House.
John Rutherford, Jardineton.
William Sanders, Rosebank, Lockerbie.
Colonel Patrick Sanderson, Glenlaggan, Parton.
Henry Sawyer, Greenbrae.
Alexander Scott, Annan.
Alexander Scott, Erkinholm, Langholm.
Rev. James Hay Scott, M.A., Sanquhar.
Robert A. Scott, Kirkbank.
Walter Henry Scott, Nunfield.
Count of Serra Largo, Cowhill Tower.
Mrs Thomas Shortridge, Stakeford.
Rev. Richard Simpson, B.D., Dunscore.
Adam Skirving, Croys, Dalbeattie.
James Smith, Commercial Bank.
Samuel Smith, M.P., Liverpool.
Christopher Smyth, English Street.
Earl of Stair, K.T., Lord-Lieutenant of Wigtownshire.
James G. Hamilton Starke, M.A., Advocate, Troqueer Holm.
Sir Mark J. M'Taggart-Stewart, Bart., M'P., Southwick.

Peter Stobie, Queen's Place.
John Symons, Irish Street.
John Symons, Royal Bank.
Philip Sulley, F.S.A., F.R.Hist.S., Cupar.
Mrs Philip Sulley, Cupar.
Miss Ethel Taylor, Longtown.
Miss Tennant, Aberdour House.
Alexander Thompson, Chapelmount.
Miss Mary Thompson, Chapelmount.
James S. Thomson, High Street.
Rev. John H. Thomson, Hightae.
Alexander Turner, Terregles Street.
Miss Wallace, Lochmaben.
Miss Amy Wallace, Lochmaben.
Robert Wallace, Brownhall School.
Thomas Watson, Castlebank.
James Watt, Noblehill.
Rev. Robert W. Weir, M.A., Castle Street.
David Welsh, Waterloo Place.
James W. Whitelaw, Troqueer Moat.
John H. Wilkinson, Annan.
James R. Wilson, Sanquhar.
Colonel James Maxwell Witham, Kirkconnel.
Mrs Maxwell Witham, Kirkconnel.
Miss Maud Maxwell Witham, Kirkconnel.
Dr John Maxwell Wood, Irish Street.
Edward C. Wrigley, Gelston Castle, Castle-Douglas.
William M. Wright, Charnwood.
Robert A. Yerburgh, M.P., Chester.

PLATE I.



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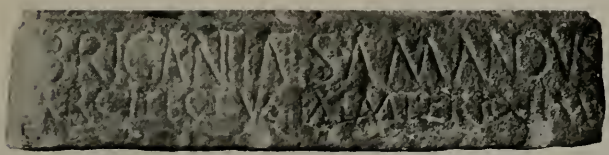

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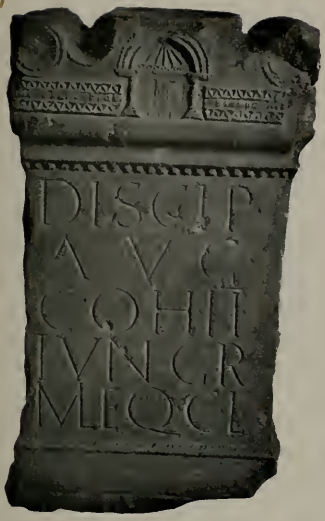
PLATE II.



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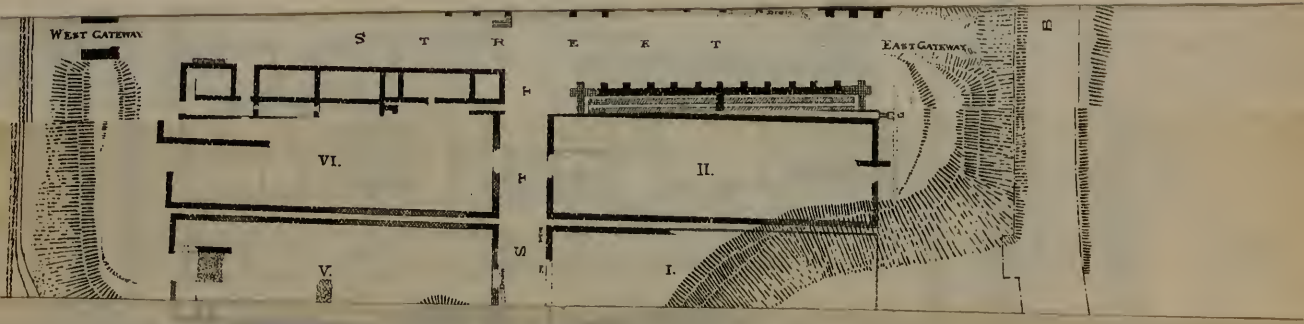
BRITISH MUSEUM
NATURAL HIST

BIRRENS ROMAN STATION
DUMFRIESSHIRE.

PLATE Ia.



Birrens Roman Station
Dumfriesshire.

Plate Ia

E.
Centre of Farm Road
A
Garden
Main Water
T
Datum
100
250 feet
Scale
Public Road
V
Level of Floo
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East Buildin
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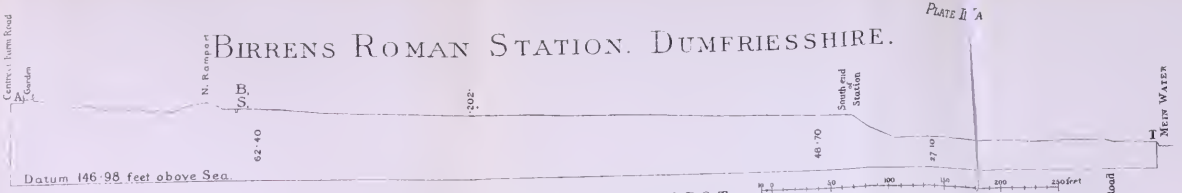
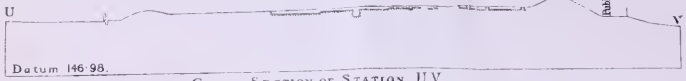
PLATE II A

BIRRENS ROMAN STATION. DUMFRIESSHIRE.

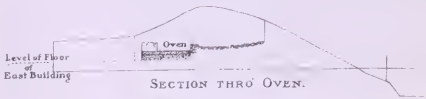


LONGITUDINAL SECTION OF STATION, A.B.S.T.

Scale 10 0 50 100 150 200 250 feet



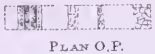
CROSS SECTION OF STATION U.V.



SECTION THRO' OVEN.

PLAN Q,R.

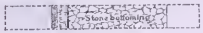
SECTION Q.R.



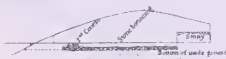
PLAN O,P.

SECTION O,P.

SECTION M,N. SECTION K,L.



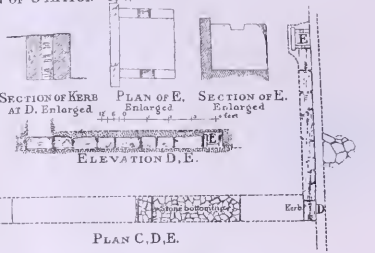
PLAN H,J.



SECTION H,J.

PLAN F,G.

SECTION F,G.

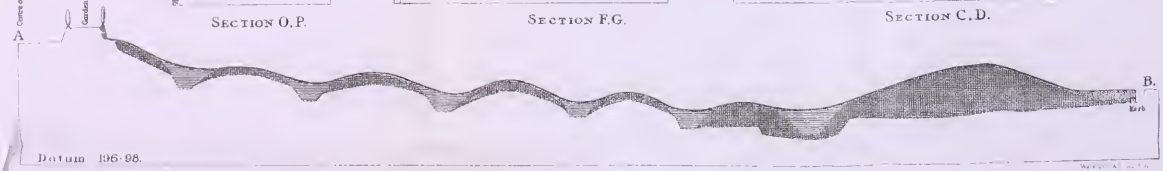


SECTION OF KERB AT D. PLAN OF E. Enlarged SECTION OF E. Enlarged

ELEVATION D,E.

PLAN C,D,E.

SECTION C,D.



SECTION A, B.

Scale 10 5 0 10 20 30 40 50 feet

Soil.
Silt.
Red earth
Clay
Brushwood
Depth Cut

James Barbour

BIRRENS ROMAN STATION, DUMFRIESSHIRE.

Fig 19

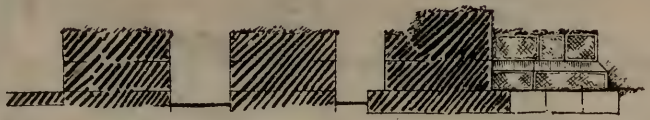
Fig.20.

Fig 21.

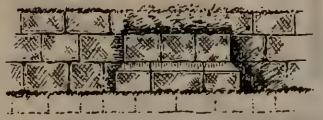
Fig 22

END OF EAVES-DROP SPACE. at a.
Fig 5.

ELEVATION OF WALLING AT NORTH-WEST CORNER OF BUILDING, XI.
Fig 4.

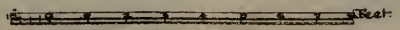


SECTION OF WALLS AND DUCTS OF BUILDING, IV.
Fig 1.



SIDE OF BUTTRESS.
Fig 2

FRONT OF BUTTRESS.
Fig 3.



Feet

Scale of Sections and Elevations.

BIRRENS ROMAN STATION, DUMFRIESSHIRE.


Fig 18

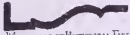

Fig 20


Fig 21


Fig 23

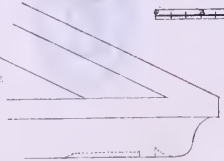

Fig 24

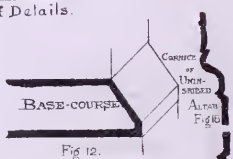
Scale of Details.

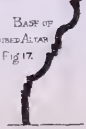

Moulding of Historical Tablet
Fig 15

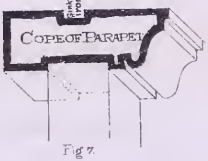

Stone Floor Tile
Fig 16.

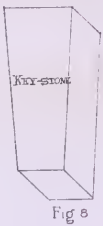
Cornice of Disciplina Altar
Fig 14
Cap of Piers.
Fig 10
Base of Disciplina Altar
Fig 13

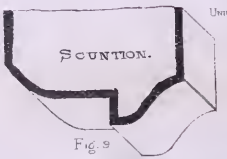

Pediment Moulds.
Fig 11

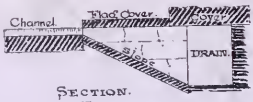

Cornice of Unscribed Altar
Fig 19
Base-course
Fig 12.

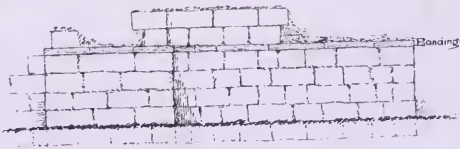

Base of Unscribed Altar
Fig 17.

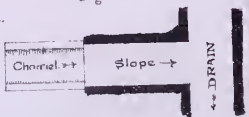

Sinking for iron strap
Cope of Parapet
Fig 7.

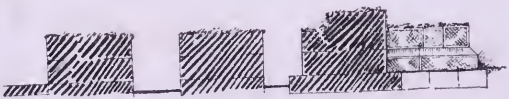

Key-stone
Fig 8

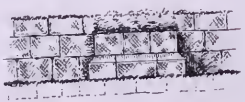

Scuntion.
Fig 9


Channel
Flag Cover
Drain
Section.
Fig 6

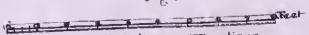

Banding Course.
Elevation of Walling at North-west corner of Building XI.
Fig 4

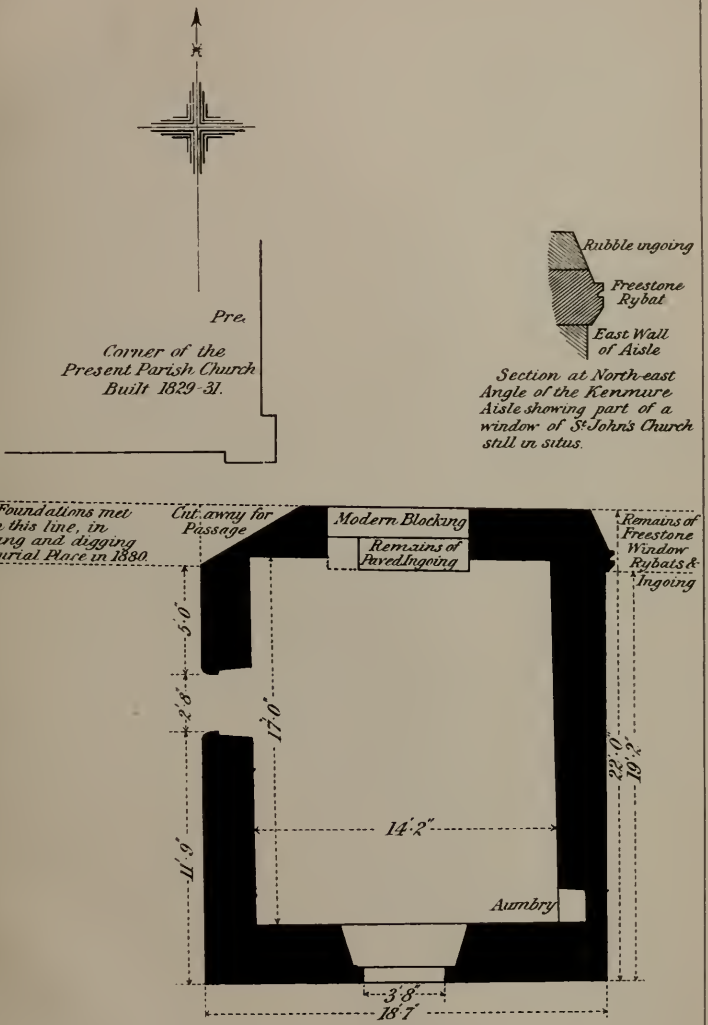

Channel
Slope
Drain
Plan of Drain-inlet at end of Eaves-drop space of 3.
Fig 6


Section of Walls and Ducts of Building IV.
Fig 1.


Front of Buttress
Fig 3.

Side of Buttress.
Fig 2


Feet
Scale of Sections and Elevations.



Scale 1/8th of an Inch to the foot

KENMURE BURIAL AISLE. GROUND PLAN.

W Galloway Delt


BRITISH MUSEUM
NATURAL HISTORY

KENMURE BURIAL AISLE FROM THE S.W.