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THE TRANSACTIONS

AND

JOURNAL OF PROCEEDINGS

OF THE

DUMFRIESSHIRE AND GALLOWAY

Natural History & Antiquarian Society.

SESSIONS 1883-84, 1884-85, 1885-86.

PRINTED AT THE COURIER AND HERALD OFFICES, DUMFRIES.

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"The winds
And rolling waves, the sun's unwearied course,
The elements and seasons: all declare
For what th' eternal Maker has ordain'd
The pow'rs of man: we feel within ourselves
His energy divine: He tells the heart
He meant, He made us to behold and love
What He beholds and loves, the general orb
Of life and being; to be great like Him,
Beneficent and active. Thus the men
Whom nature's works can charm with God himself
Hold converse; grow familiar, day by day,
With His conceptions; act upon His plan;
And form to His the relish of their souls."—*Akenside.*

"If any man maintaineth that learning takes up too much time that might otherwise be better employed, I answer that no man can be so straitened and oppressed with business and an active course of life but may have many vacant turns of leisure. . . . Wherefore, let no man fear lest learning should expulse business; nay, rather it will keep and defend the mind against idleness and pleasure, which otherwise, at unawares, may enter, to the prejudice both of business and learning."—*Bacon.*

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PRINCIPAL CONTENTS.

FIELD MEETINGS.

PROCEEDINGS AND TRANSACTIONS

OF THE

DUMFRIESSHIRE AND GALLOWAY

NATURAL HISTORY AND ANTIQUARIAN

SOCIETY.

SESSION 1883-84.

5th October, 1883.

ANNUAL MEETING.

Dr J. Gilchrist, President, in the Chair.
Twenty-five members present.

Donations.—The Secretary laid on the table Nos. 6, 7, and 8 of the Transactions of the New York Academy of Sciences and Part 7 of the Transactions of the Essex Field Club. Mr M'Andrew, V.P., presented 500 specimens of Mosses, Hepatics, and Lichens; Mr M'Dowall intimated that he had received from Mr Dinwiddie, of New York, two small objects of Egyptian antiquity for the Society.

Exhibits.—Mr Wilson, V.P., exhibited 30 specimens of the rarer plants found by him during the past season. One of these was the American pond-weed, *Elodia canadensis*, which is now very abundant in the Nith, and spreading rapidly. He also exhibited a piece of porphyry bored by *Pholas dactylus* and several shells of this mollusk, and briefly described the different theories respecting the way in which the holes were made.

Secretary's Report.

The Secretary (Mr J. Rutherford) submitted the following Report for the past Session:—The number of members on the roll at last annual meeting was 137. During the year 72 names were added, but owing to death and other causes

12 names have been removed, leaving at present 197 names on the roll. During the session we have had the usual seven monthly winter meetings and five summer field meetings; and it is with pleasure that I bring before you the fact that the attendance at all the monthly meetings has been much larger than in any previous year, giving evidence of the increased interest taken in natural history and antiquarian subjects. The average attendance at our winter meetings was 34, and at our summer field meetings 26, as against 22 and 21 the previous year. At the ordinary winter monthly meetings 14 papers were read, many of which were of a very high class character.

The January winter meeting requires special notice, for it was held as a conversazione in the Greyfriars' smaller hall, and you will all remember it with delight as being one of the sunnier spots in connection with our year's work. A large collection of objects of natural history and antiquarian interest was sent in for exhibition by members and friends. The meeting was opened by Provost Lennox, and several addresses were delivered during the evening. The public were admitted by ticket, and the number of those that attended was so large that the hall was crowded; and many unable to obtain admission went away. On the 30th March a special meeting of the Society was held for the purpose of considering the proposed alterations and repairs on the "Old Bridge," as they would have materially modernised and altered the ancient character of that structure. A petition approved of by the meeting was laid before the Town Council, with the satisfactory result that the Council changed their first plan, and, in the repairs executed, maintained the old lines of the bridge.

During the winter months we also had an intermediate course of lectures. The subjects chosen related to natural science and antiquities, and were treated in a popular way, and drew large audiences. I am of opinion that those lectures and the conversazione were the means of considerably increasing the popularity of the Society during the session.

The Summer Field Meetings were all well attended; and, considering the amount of ground to be gone over at each meeting, a fair amount of work was done. I think our methods on these occasions might be improved. It is well known, that if curiosity or enquiry is excited, knowledge is the result. At all our Field Meetings (with one or two exceptions) our botanists gather plants, and stow them carefully away in

their vasculums, shutting the lids with the gentlest tenderness, and on they go again with their eyes constantly fixed on the ground, and, unless interrogated by some one as to their latest find, it is, like the scapegoat of old, "never heard of any more." It is the same with our geologists and entomologists, and the result is that nobody gets any information but themselves.

The next matter I have to notice is the recent Conference and Exhibition of the Cryptogamic Society of Scotland, which was held in Dumfries. Though not strictly the work of this Society, yet it was so closely connected with it that it deserves to be noticed here. The committee and office-bearers of this Society were, for the time being, appointed the local committee of the Cryptogamic Society, and had to undertake all the correspondence and work required for the Conference and Exhibition. These took place in Greyfriars' Halls, and were pronounced by the members of the Cryptogamic Society to be most successful in every respect. There was a small deficiency of 33s after all expenses were paid, and this was defrayed by the guarantee fund.

During the last session a large number of donations have been received, and deposited, according to agreement, in the Observatory Museum.

In closing this brief report of our year's work, allow me sincerely to express the hope that we may continue to prosper during this session as we have done during the last; and that as we gradually become more and more acquainted with the beauties and perfections of Nature, our minds may be lifted up in adoration to Him that made the world, with the fulness thereof.

The Treasurer, Mr W. Adamson, submitted his financial statement for the session, showing the Income and Expenditure to be as follows:—

Income.				Expenditure.			
By Arrears - - -	£1	0	0	To Balance due from last Session - -	£8	1	9
,, 140 Subscriptions at 2/6	17	10	0	,, Secretary's Expenses	6	5	3
,, 43 ,, 5/	10	15	0	,, Printing of Circulars, &c.	6	17	6
,, Interleaved Copies of Flora and Transactions sold - -	1	19	0	,, Rent of Halls - -	2	0	0
				,, Sundries - - -	0	8	0
				,, Treasurer's Expenses	0	7	7½
				,, Balance on hand -	7	3	10½
	£31	4	0		£31	4	0

"Audited and found correct.—(Signed) J. W. Kerr."

The meeting then proceeded to the election of Office-Bearers and Committee of Management, with the following results:—

President, Dr J. Gilchrist; Vice-Presidents, Sheriff Hope, Messrs J. G. Starke, J. Wilson, and J. M'Andrew; Secretary, Mr J. Rutherford; Assistant Secretary, Mr S. A. Chrystie; Treasurer, Mr J. Lennox, instead of Mr Adamson resigned. On the motion of Mr Wilson, it was agreed to increase the number of the Committee from eight to ten (five to form a quorum), and the following were unanimously elected: — Messrs W. Lennon, J. Neilson, T. Watson, J. M'Meekan, W. Adamson, J. Maxwell, J. Barbour, J. Davidson, R. Chrystie, and S. M. Brown; Auditor, Mr G. H. Robb.

On the motion of Mr R. Chrystie, it was agreed that the Transactions for the past three years be printed, and the Committee were instructed to appoint a sub-committee to prepare the same for the press.

The subjects of a Conversazione, Intermediate Lectures, and a proposal to hold short Field Meetings during the summer were next discussed, but these were remitted to the Committee to be dealt with as they thought best, and who were to report at the next meeting their decisions.

The Secretary read a letter received from the Rev. W. Graham of Trinity Church, Edinburgh, suggesting that the Society might respectfully memorialize Mr Robert Jardine, M.P., and Capt. J. Hope-Johnstone to explore the ruins and fosse of Bruce's Castle at Lochmaben, in the interests of antiquarian and historical investigation. On the motion of Mr Watson, this was also remitted to the Committee for consideration.

2nd November, 1883.

Mr J. Gibson Starke, V.-P., in the Chair. Thirty members present.

New Members.—Mr J. S. Montgomery and Mrs Montgomery, Rosemount Cottage; Messrs J. Hannay, Church Crescent; J. W. Dods, St. Mary's Place; and J. Clark, The Schoolhouse, Lochmaben.

Donations.—The Secretary laid on the table a specimen of diseased parr, preserved in spirit, showing patches of the fungus *(saprolegnia ferox)*, the gift of Mr Bruce of Slogarie; a Catalogue of the Armour, &c., in the Royal Museum of Antiquities, Brussels, presented by Mr Starke; a silver coin of the reign of

Charles I., found at Greystone, by Mr W. Rae, Queen's Place; a Land-rail *(crex pratensis)* by Mr J. T. Scott.

Exhibits.—The mummified remains of a cat and rat—the cat having its teeth firmly fixed in the neck of the rat—found in that posture after the fire at the London Stock Exchange, were exhibited by Mr Graham. Miss Burnet exhibited a number of Indian curiosities, including a brass tray, ear-rings, a necklet and necklace made of coral, two serpents' skins, the nest of the tailor bird, and a humming bird.

Communications.

I. *The Sociological Value of Entomology.* By D. Sharp, M.B.

Dr Sharpe read an interesting paper on the above subject, in which he stated that the estimated number of insects on the globe was nearly 2,000,000 different species, and that it would take the work of a life-time to investigate the life history, the distribution on the face of the earth, and the relation to others of a single species. He pointed out the great importance of entomology in being able to discriminate friends from foes, as well as the benefits to be derived by it from an educational and recreative point of view. Referring to the wonderful variety in the size and structure of insects, he exhibited a beetle *(Ptilium excavatum)*, forty of which would be required to make a heap the size of an ordinary toilet pin's head; and yet it consisted of an external skeleton, composed of 150 or 200 articulated pieces corresponding to bones, and within the skeleton there was a vast number of muscles, a complicated nervous system, and complex circulatory, respiratory, &c., apparatus, analogous to the internal organs in the larger animals.

II. *The Museums of Brussels.* By Mr J. Gibson Starke, V.-P.

In this paper, Mr Starke described the principal museums of Brussels, and enumerated the natural history and antiquarian specimens interesting to the members who might visit that city.

7th December, 1883.

Dr Gilchrist, President, in the Chair. Thirty-seven members present.

New Members.—Messrs A. Innes, Inland Revenue; W. Baird,

Loreburn Street School; T. Laing, Noblehill; J. Thomson, Midtown, Carlaverock; R. Paterson, High Street; and W. Smith, Terregles Street.

Donations.—The Transactions of the Linnean Society, from W. D. Robinson Douglas, Esq., in parts—on Zoology from Feb., 1874, to Oct., 1883; and on Botany, from Feb., 1877, to Sept., 1883. The Transactions of the Glasgow Natural History Society for 1881-82. Two old volumes from Mr Riddick—one on "The Heart's Ease," by Dr S. Patrick, printed 1682; the other on "Dying Thoughts," by Rev. W. Crawford, 1744. The Chairman presented about 100 specimens of minerals and rocks of the district.

Communications.

I. *Ornithological Notes.* By Mr W. Hastings.

Amongst a great variety of birds that have been forwarded to me from various parts of the country for preservation during this year, I have very little to note of any species that can be called *rare*, although some of them are by no means common. In the month of September I received a fine specimen of the female black-tailed godwit *(Limosa Ægocephala L.)*, the second one that I have had killed in the district. It is a small light-bodied bird, not larger than the golden plover *(charadrius pluvialis)*, with very long, slender legs, adapting it for wading in the shallow pools upon the banks of rivers left there by the ebbing tide. About the same time I received a curious specimen of the ring ouzel *(turdus torquatus)* or mountain blackbird, with a pure white head and neck, which gave it a very unusual appearance. I have had the common blackbird marked in much the same way, but never the mountain one. It frequents the rocky glens throughout the country, and I have seen the peregrine falcon *(falco peregrinus Gm.)* and it having their nests both upon the same rock. In the same month I received a fine specimen of the male shoveller *(spatula clypeata L.)* I have had the duck many times, but never the drake. It was shot in Wigtownshire. The great black-backed gull *(larus marinus)* seems to be more plentiful this winter than usual. I have had a good many specimens lately; it is a large and fine species. In the month of October I received a box containing among other things four specimens of the small crested cormorant or shag *(phalacrocorax cristatus F.)*, a species that is not met with in this district, but is known to

breed upon Ailsa Craig. It is a most successful fisher. The short-eared owl *(asio accipitrinus P.)* seems to be very plentiful this winter. I had more of them than I ever recollect of having in one season before. I also received lately a very curious specimen of the grey hen assuming the plumage of the cock; she is considerably larger than the common grey hen, and has a curious mottled appearance—black and grey all over. About the beginning of last month I received a good specimen of the red-breasted merganser *(mergus serrator L.)*, and in winter plumage; it subsists upon fish, and has the bill teethed like a saw for the purpose of holding its slippery prey. It is not uncommon about the outer Hebrides, and also in the Orkney Islands. These are a few specimens that I have thought worth taking notice of—some for their rarity in the district, and others for their appearance in greater numbers than usual. I may also mention that squirrels are now very plentiful throughout the country.

II. *Notes on Lincluden Abbey*, No. 1. By Mr James Barbour.

For this important communication, see proceedings of 7th March, 1884, as it is combined with No. 2, which was then read, for the purpose of giving a more concise and complete description of this noble edifice, and of the ruins recently unearthed by the excavations conducted by Captain Maxwell.

4th January, 1884.

Dr Gilchrist, President, in the Chair. Twenty-seven members present.

New Members.—Mr J. M. Aitken, Ravenshill; Mrs Baird, Mrs M'Kenzie, and Mrs M'Gowan were elected ordinary members; and Messrs G. F. Black and R. Henderson corresponding members.

Exhibits.—Mr W. Adamson exhibited specimens of Coralline limestone and trap rocks from Winnipeg and Niagara. Mr Henderson exhibited numerous specimens of grasses and flowering plants from Manitoba, and the skins of several wild animals, including the badger, goffer, squirrel, and skunk. He stated that the specimens of wheat and oats on the table were each grown from a single grain, and that it was not unusual for the

wheat to have forty heads, and the oats as many as thirty, on the one plant

Communications.

I. *First Blossoming of Wild Flowers in Tynron during the Summer Months of 1882 and 1883.* By Mr James Shaw.

This paper was read by Mr Wilson. The writer stated that the area included in his observations was at an elevation of from 300 to 1400 feet above sea level. The soil of the district is thin, well adapted for sheep pasture, and the geological formation is Silurian and conglomerate. There are no fields of wheat, barley, or rye ; but oats, turnips, ryegrass, and potatoes are grown. Mr Shaw's list of plants recorded the dates when first noticed during the two seasons, from which it appeared that the year 1883 was much later than 1882. The month of February, 1883, was exceedingly mild, and induced the Coltsfoot *(Tussilago farfara)* to blossom. March, however, was cold and backward, with cutting frosty winds, so that in the beginning of April plants of *Tussilago* might be seen surrounded by the withered petals of the first crop. In his concluding remarks, Mr Shaw says " that the marsh marigold, the stitch-wort, and the common broom are thus found a week behind in 1883; the spring blue-bell *(scilla nutans)* and the marsh violet *(V. Palustris)* are noticed a fortnight later in 1883. The early orchis plants *(O. mascula)* were in blossom in April, 1882, but not noticed until the third week of May, 1883. *Geum rivale* is equally behind. Some of the flowers noticed in blossom in the first week of June, 1882, are not noticed until the third week of June, 1883. Generally speaking, the vanguard of any given species came to the front a fortnight later in 1883."

II. *Notes on the National Collection of Antiquities in the Museum at Edinburgh.* By Mr G. F. Black.

In this communication, which was read by the Secretary, the writer briefly described the foreign section of the museum, and promised to contribute a paper on the Scottish Antiquities at a future meeting.

III. *Notes on the Natural History of Southport.* By Dr J. Gilchrist, President.

In the course of this paper, Dr Gilchrist mentioned that

Southport is noted for the rapidity of its growth, and also for the peculiarity of its site. It is built in the centre of a sandy district, about three miles in diameter, which is terminated on the western side by the sea. The rocks of the district are Triassic, being extensions of the Cumberland and Westmorland hills. The flora is rich and varied, and, with regard to many species, unique, owing to the influence of the sandy soil and the sea. As an illustration to the paper, he exhibited numerous specimens of the plants and a few pieces of the rocks collected there during a recent visit.

18*th January*, 1884.

Dr Gilchrist, President, in the Chair. Forty members present.

A Special Meeting of the Society was held this evening in the Greyfriars' smaller hall for the purpose of giving the members an opportunity of exhibiting and describing objects of interest which they possessed. Dr Gilchrist exhibited several specimens of minerals from the Leadhills and other localities. Mr Wilson exhibited about 100 specimens of mosses, and recommended the botanical members to take up that branch of study, as the specimens were to be found at all seasons. Mr Lennon exhibited two cases of Lepidoptera. Mrs Murray sent a piece of the counterpane which covered the bed on which Queen Mary slept at Terregles House. Mr James Lennox shewed two fine specimens of bronze spear heads. The Secretary (Mr Rutherford) exhibited a bronze ball, which had been found in Torthorwald Parish, 3 ft. 3 in. beneath the surface. The ball was submitted to Mr Dudgeon of Cargen, who sent it to the National Museum, Edinburgh, where it was analysed, and found to be composed as follows :— Copper, 62·9 ; tin, 13·7 ; zinc, 12·2 ; lead, 8·8 ; iron, 0·6 ; silicious matter, 1·4. A note accompanied these results, stating "that none of the authorities in these matters can make out what it has been intended for ; no similar bit of bronze has been seen before." Other objects of interest were exhibited by Mrs M'Kenzie, Miss Burnet, and Mr S. A. Chrystie.

1*st February*, 1884.

Dr Gilchrist, President, in the Chair. Thirty members present.

The Secretary intimated that the Society was about to lose one of its energetic members—Mr J. M'Meekan—who would in a few days leave this country for Tasmania, and moved that Mr M'Meekan's name be transferred from the Roll of Ordinary to that of the Corresponding Members. The Chairman seconded the motion, and remarked that Mr M'Meekan was one of the few young men who had taken an active interest in the Society for several years. He had done what all young men ought to do —he had never missed an opportunity of gaining knowledge and information, and he would find now that there was nothing to him so important. The motion was unanimously agreed to.

Donations and Exhibits. — The Secretary laid on the table Vol. II., Part III., of the Proceedings of the Perthshire Society of Natural Science, and Vol. II., Part III., of the Transactions of the Glasgow Archæological Society, as donations from these Societies. Dr Gilchrist exhibited a small chicken that had been born blind, and remarked that this malformation was of rare occurrence in ornithology. He also exhibited a piece of slate from Keswick, containing vestiges of the original stratification.

Communications.

I. *The Founder of Lincluden Abbey and his Relatives.*

By Mr W. M'Dowall. (Abstract).

In this paper Mr M'Dowall stated that Galloway at the Lincluden era was not only Celtic in its population, institutions, and language; it was besides, all but independent of the Scottish Crown. It was in the neighbourhood of Northallerton, amid conditions of battle and slaughter, that we get our first reliable glimpse of Ulgric and Dovenald, the founders of the family to whom we owe the erection not only of Lincluden Abbey, but also of many other edifices, chiefly ecclesiastical, in our own locality. The name Owen Galous appears in the early part of the eleventh century annals as a ruler over some Celtic tribes; and, says Mr M'Kenzie, in his valuable *History of Galloway*—"There is a considerable probability that this chief was descended from Dunwallon—the British form of the Irish

Dovenald, Donal, or Dowall; and the epithet Galous may be considered as establishing a kind of connection with Galloway." The two chiefs already named are supposed to have been descendants of Galous; and it was they who fought and fell in the Battle of the Standard, while leading the Galloway contingent of the Scottish army. They were succeeded in the lordship of the province by Fergus, who is best remembered as the pious founder of the Monasteries of Tongland, Whithorn, and Soulseat, the Priory of St. Mary's Isle, and the Abbey of Dundrennan. He died at Holyrood Abbey in 1161, first, however, appointing his two sons, Uchtred and Gilbert, his successors. His chief residence was the Castle of Loch Fergus, built on a rocky islet that rose out of a lake near Kirkcudbright, long since drained away. Uchtred, walking in the footsteps of his peace-loving and pious father, dedicated a considerable amount of his worldly substance to the Church. Hence in due season arose the fair Abbey with which his name is associated, and "the grey ruins of which still held to keep his memory green." Gilbert, a man of quite another stamp, wishing to acquire the entire lordship of the province, murdered his brother Uchtred in 1174, at Loch Fergus Castle, under circumstances of the most revolting cruelty. Mr M'Dowall described at some length the connection of the royal house of Bruce with Uchtred, shewing that the Bruce of Bannockburn was a lineal descendant of the Lords of Galloway, he being the great-grandson of Gilbert, the fratricide. After noticing Alan Lord of Galloway, his daughter Devorgilla, and many more of Uchtred's relatives, including our present Queen, Mr M'Dowall stated that the connection of the Bruce family was renewed with Uchtred and Lincluden when the great-granddaughter of the hero king, the Princess Margaret, widow of Archibald Douglas Lord of Galloway, died, and was buried in the Abbey, the gorgeous tomb which received the dust of the illustrious lady still, though sadly marred, revealing striking traces of its original beauty. There the remains of the Princess were laid, an inscription on the walls above setting forth her name and titles; and a full length stone effigy laid over the sepulchre, portraying the lineaments of her who slept below. Quite recently during the work of excavation carried on at the Abbey, the figure of the Princess, in a mutilated condition, was discovered, after it had been lost for nearly a century. This was a rare prize; and the writer was not without the hope of seeing the figure restored, and placed anew in its

original position. Should Her Gracious Majesty Queen Victoria ever come to this part of the country, as it was lately expected she would do, she might, he thought, be asked, with perfect propriety, to visit the house built by a far-away forbear in a remote age, and in which lies interred the dust of one of her royal progenitors. With the exception of the Abbeys of Holyrood, Melrose, and Dunfermline, there is no monastic house in Scotland that Mr M'Dowall knew of with which there is intertwined so many distinguished family ties as Lincluden. A rare piece of architecture, it is also full of historic suggestiveness, and to its ruined mural crown a bright poetical halo has been given by the genius of Burns. All the more grateful should we be, therefore, that the decay of Uchtred's Abbey has been arrested, and many of its long-hidden features brought to light by the present liberal representative of a renowned Nithsdale and Galloway family—Captain Maxwell of Terregles.

The Chairman, in moving a vote of thanks to Mr M'Dowall, said the paper just read was really so very important in itself that it ought not to be confined to the ordinary publications of the Society ; and he suggested to the excursion committee that they should arrange during the summer months for a visit to Lincluden Abbey, and that Mr M'Dowall and Mr Barbour should be asked to accompany the excursion, and give them the benefit of their knowledge regarding the history and architecture of the venerable pile.

II. *Zymotic Diseases, their Cause and Cure.* By Mr J. Wilson, V.P. (Abstract).

After noticing the various diseases which belong to the zymotic class, Mr Wilson said that until a few years ago it was the general opinion that they were caused and propagated by decaying organic matter, which was everywhere present, and especially in the fall of the year. Now it was established beyond question that such was not the case, but that these diseases were due to microscopic organisms having obtained an entrance into the system, and there produced the disturbances which characterised the different diseases. He next traced the history of the "Germ Theory," from Schwann's discovery of the yeast ferment in 1836 to the present time, and briefly referred to the investigations of Pasteur, Tyndall, Lyster, Budd, Miquel, Cohn, and Koch, which led to its adoption.

These microscopic germs were arranged in a class by themselves under the name *Schizomycetes*, or splitting fungi, and were placed between the algæ on the one side and moulds on the other. They were divided into four principal groups, viz.—*micrococci, bacteria, bacilli*, and *vibrios and spiral microbes;* but this like all other classification, was only a matter of convenience, for in appearance they closely resemble each other, and the dangerous ones—*pathogenic*—can scarcely be distinguished from the *septic* or perfectly harmless ones. Having described several of the germs and exhibited microscopic drawings of a number of them, he referred to the multifarious modes by which infection can be spread—by direct contagion, by infectious matter from diseased persons escaping from sewers, &c., being introduced into water, foods, or articles used for culinary purposes, and by the inhilation of vitiated air. He believed that before the disease was propagated there must be certain conditions favourable to the growth and development of the germ. For example, if seed were sown on a macadamised road it would not grow for want of sufficient nourishment; but if in a cultivated field, it would have all the conditions favourable to its growth. In the case then of the germs of disease, they must have the suitable *nidus* or else perish.

There are other conditions governing the spread of disease, such as predisposition through weakness or other causes. Although the germs of the different diseases have some things in common, they do not always attack the system in the same manner, for each disease has its own characteristic. The germ of diphtheria *(micrococcus diphtheriticus)* attacked the throat, while those of cholera and typhoid fever attacked the alimentary canal.

In reference to their cure, the well-known axiom, "prevention is better than cure," was all that he would then offer, but as to how "to prevent" the disease he said—1st. Limit the sphere of action by complete isolation of the diseased; 2nd. Fresh air, and plenty of it; 3d. Thorough disinfection. Having described a number of experiments made with disinfectants, he recommended chloride of lime as the cheapest and one of the best, but it had a disagreeable odour, and was detrimental to colours, &c. Solutions of permanganate of potassium were good, and could be easily used, also carbolic acid, and the various powders containing it, and sulphur and sulphurous fumes. One of the best was a solution of mercuric chloride, but this was a deadly poison, and he did not recommend it for that reason. In conclusion, Mr

Wilson referred to the prevalence of fever in Dumfries during the past autumn and the preceding one, and asked if the cause of this was not traceable to a want of due regard to the sanitary laws? In his opinion he believed it was, and for that state of affairs he held the Local Authority responsible, for that body neglected to put in force the powers conferred upon them by Acts of Parliament. The open sewers and middens throughout the burgh might be compared to nursery gardens, in which the germs of disease were "forced," and from which they were disseminated far and wide, carrying with them disease and death into many bright and happy homes. Until the authorities remedied these unsightly and dangerous nuisances, every case of fever in their midst would be a stain on the fair escutcheon of their royal and loyal burgh.

7th March, 1884.

Dr Gilchrist, President, in the Chair. Thirty-two members present.

New Members.—W. H. Maxwell, Esq. of Munches, was elected a Life Member; and Messrs D. Carnegie, Castlebank; and E. M'Gowan, English Street, were elected Ordinary Members.

Donations.—Mr Wilson presented, on behalf of Mr Carnegie, six old copper coins found by the donor in his garden in the neighbourhood of Montrose.

Exhibits.—The Chairman exhibited, on behalf of Miss Gillies, a fine section of a stalagmite, a case of copper ores, a nugget of native copper, and a piece of the brain coral. Mr Hogg exhibited a box of shells from Aden, a "potato stone," a fine old flint pistol, an ancient tobacco-box found in the Highlands, and a piece of black limestone from Niagara.

Communications.

I. *The Destruction of Beasts and Birds of Prey.* By Mr W. J. Maxwell, Terregles Banks.

The subject of which I am to speak is not of scientific interest alone, and it is not as a scientific question that I intend to deal with it. I leave that to some member of this Society more deeply versed in natural history than I am. I wish, rather, to draw attention to the practical or

utilitarian view of the question, in the hope that something may be done before it is too late to check the indiscriminate destruction of the native beasts and birds of prey. One of those predatory animals, the fox *(canis vulpes)*, I may pass over. There is no fear of foxes being exterminated in this district for some time to come, either by fair or foul means. The badger *(meles taxus)* and polecat *(mustela putorius)* may, I suppose, be considered extinct hereabouts, although I can recollect when the latter animal was quite common; and, indeed, I remember, when a boy, seeing a nest of young ones dug out of a hole in our own garden. The same fate which has befallen the polecat seems likely soon to overtake the stoat *(M. erminæ)*, a more useful animal, in my opinion, and one deserving of more consideration than he has hitherto met with. I look upon the stoat as our best protector from the legions of rats which now threaten, not only to eat us out of house and home, but even to pull down the very houses in which we live. The country simply swarms with rats. Every ditch and burn is infested by them, and therefore, though there is an endless number of different ways of killing or driving them away from houses, all those various expedients, however ingenious, are in vain except as means of obtaining temporary relief. As soon as one batch of rats is killed off or expelled, a fresh lot are ready to take up the quarters they have vacated. The only effectual check upon the rat is the stoat, who hunts him down with deadly pertinacity in his favourite haunt—the ditch or running stream. Although the rat can swim like a fish, and can thus escape from a dog or cat, he has a poor chance of saving his life when pursued by a family of stoats. As I have seen myself in the days when stoats were plentiful, they hunt the rat as a pack of foxhounds hunt the fox, and can boast of a much larger percentage of kills. The stoat is undeniably an enemy to game, and is therefore very naturally an object of hatred to the gamekeeper. It would be unreasonable, I think, to blame the keeper for waging war against an animal which he looks upon as a dangerous enemy to the game which it is his duty to protect. Admitting, however, that the stoat is a poacher, and destructive to game, is there not good reason for believing that the rat is as bad? Would not a few stoats be a lesser evil than legions of rats infesting every brook and every hedgerow, and doubtless robbing many a partridge or pheasant's nest? When we consider the large number of rats that two or three stoats would kill in

the course of the year, it certainly seems as if it would pay best to leave the stoat alone. Undoubtedly, the rat is capable of atrocities which the stoat would never think of. For example, at a farm steading not far from here, I heard of their killing and devouring two young pigs; and this was not all. They afterwards killed a calf. At this rate, it is not unlikely that before long they will kill a cow, and they may not stop there. They have frequently been known to attack man. If the stoat is to be saved from extermination there is no time to be lost, as he is already becoming a very scarce animal, and probably the next four or five years will see the last of him in this district. The common weasel *(mustela vulgaris)* is still frequently to be seen, but I doubt if he is such a formidable enemy to the rat as the stoat. He is a very useful little animal, however, and should be protected by law. The hedgehog *(erinaceus Europæus)* is also sadly in want of some such protection. He is fast being exterminated, and will probably soon be extinct, although only a few years ago so common that one could scarcely take a walk in the fields on a summer evening without seeing several, usefully employed hunting for slugs in the dewy grass. As slugs form the chief food of the hedgehog, it is obvious that he must do an immense amount of good in that way, probably far more than we realise. Now that the blackheaded gulls *(larus ridibundus L.)* have become so scarce hereabouts, I don't know of any other check to the increase of slugs, and everyone who has anything to do with gardening knows what damage slugs can do. Why do not those who have walled gardens keep a few tame hedgehogs? I don't know whether slugs are more numerous now than they used to be, but certainly they are now a very serious pest, and will increase when there is no check upon them. Two years ago I saw a field of newly brairded oats so covered with small grey or white slugs that there must have been on an average at least thirty or forty to the square yard, and they very nearly destroyed the crop altogether. This state of things may not be due to the destruction of hedgehogs, but I am at a loss to imagine any more likely cause. Among birds of prey, undoubtedly the owl is most deserving of protection, and it is protected to a certain extent by law; that is to say, it is included in the schedule appended to the Wild Birds' Protection Act of 1880, and therefore any person killing owls between 1st March and 1st August is liable to a penalty of £1 per bird. This Act is not very strictly enforced,

however; and probably it is a good deal more in favour of the owl, that at well regulated covert-shootings owls are not shot when they make their appearance, as they often do on such occasions. Although, I don't think the owl is getting much scarcer in this neighbourhood, it is far from being treated as such a useful bird deserves. Where pole-traps are allowed there must always be a large number of owls killed. The kestrel *(Falco tinnunculus)*, also a harmless bird, living chiefly on mice, cockchafers, &c., falls a victim to this hateful invention. The only other hawks we know of in this district, are the sparrow-hawk *(Accipiter nisus)*, the buzzard *(Buteo vulgaris)*, and the merlin *(Falco Æsalon)*. They are all looked upon as deadly enemies to game, and I am not prepared to say that they do not kill game. To say that game forms any considerable portion of their food, I think, is nonsense. There is nothing in the fact of a bird being in the game list to make it more attractive to the hawk; as game must form a very small item in his style of living. Admitting that these hawks are enemies to game, there is still something to be said in their favour in the interests of sport. Anyone who has read the reports in the newspapers regarding the opening day of the grouse-shooting, must have observed that the grouse are always not only extremely scarce, but extremely wild and difficult to approach. Why is this the case? It is because in most cases the only enemy the grouse have to fear is man, and they find that the best way to baffle him is to rest on bare, exposed places, where they command a good view of the surrounding country, and can withdraw, chuckling at his discomfiture, long before he gets within shot. The grouse do not adopt these tactics where hawks abound. There they know no shelter except under the brown heather, where even the keen eye of the enemy overhead fails to detect their cowering forms. Some time ago I saw a letter in *The Field*, from the owner of a grouse moor in the Hebrides, stating that in consequence of his not allowing birds of prey to be killed on his moor, he was enabled to shoot over days the whole season, and thus have good sport without resorting to the driving system. There is, therefore, something to be said even for the sparrow-hawk, the buzzard, the peregrine falcon, and the merlin, from the sportsman's standpoint; while, as for the other animals to which I have referred, the balance of evidence is in favour of their preservation. In these days of associations for all purposes under the sun, I think it is high time there was an association for the

protection of wild animals useful to man. It will soon be too late.

II. *Notes on Lincluden Abbey.* By Mr James Barbour.

(The following includes communication read on 7th December, 1883):—

The ancient Religious House of Lincluden stands in a sequestered nook at the confluence of the river Cluden with the Nith. The ruin, in outline and colour, forms in composition with the landscape a pleasing and beautiful picture; and on close examination it exhibits architectural details rich, elegant, and of a boldness unusual, arranged and combined with harmony and taste, and admirably executed.

The plan of the Church comprises a Nave, with North and South Aisles; a South Transept or Transeptal Chapel, a Choir, and a North Sacristy.

The buildings are wholly roofless, and much of the masonry has been broken down and carried away. Of what still exists, the walls of the Chancel and Transept are nearly entire; most of the south wall of the South Aisle and a small piece of its west wall remain; the foundation of the west wall of the Nave exists, and traces of the north wall of the North Aisle and of some walls outside the north-west corner of the Church. The walls of the Sacristy are nearly entire, and considerable portions of the masonry of the "Provost's Lodging" continue standing.

The Architecture mainly is late Decorated, but fragments of other types also are found, each characteristic of the different periods when the buildings were erected. The specimens of the earlier styles were long covered by *debris*, and their existence has only now been brought to light through the clearing of the ruins recently undertaken by Captain Maxwell of Terregles. There are early English details, and also one or two stones bearing the peculiarities of the Norman style. These early remains are characteristic of the age when the first Foundation was granted for an Abbey at this place, and naturally they and the Abbey to which they belonged will fall to be considered first.

THE ABBEY.

The Abbey was founded by Uchtred, son of Fergus, Lord of Galloway, a little prior to the year 1165; and of the fabric of the Abbey Church, all knowledge of the design of which was

lost, the following description, gathered from the now uncovered remains, will present for the first time a sketch of some of its features :—

Of these early remains there is, *in situ*, at the north-east angle of the Nave, and attached to the wall of the Chancel, the base and part of the shafting of a respond or half pier, upon a pedestal. The respond measures three feet and half an inch across, from north to south. Part of the plinth of the eastmost pier of the North Arcade also remains *in situ*. Several pieces of cylindrical piers have been found, which give a diameter corresponding to the measurement across the respond mentioned ; and a fragment of a base moulding corresponding to that of the respond also exists. There remains a large number of arch stones, which went to form the Arcade arches connecting the piers. The arches have been pointed, and of two plain chamfered orders, with a string or hood moulding over them.

There are three stones, parts of arch rings, of very distinctive character. Two are moulded with a roll on the angle, a fillet and hollow on the soffit, and the zig-zag ornament on the face ; and on the other is worked an angle roll, and the zig-zag ornament on both the soffit and the face—the most characteristic ornament of the Norman style. The stones almost certainly formed part of the doorway of the Church, a feature which in Scotland retained something of the Norman type after the style had otherwise become obsolete.

Numerous fragments of windows remain—pieces of mullions, tracery, and arch-shaped tops. One piece of tracery is grooved for the reception of cusping after the manner of the earlier windows of New Abbey ; and the arch-shaped tops are also cuspated apparently into trefoil forms. These fragments are early English, and of a somewhat more advanced type than was prevalent at the period of the foundation.

In addition to the architectural fragments described, some of the foundations and traces of walls remaining appear also from the character of the masonry to belong to the earlier building. The walling of the later work of the Church is faced with finely hewn and closely jointed ashlar, while that of the earlier work is faced with rubble, roughly dressed, and with wide joints. Of this latter description are the remains of the west wall of the Nave and all the north side of the Church. The steps of the west doorway, which remain *in situ*, and the foundation of a stair at

the west end of the North Aisle, which led to the Dormitory, also belong to this period.

Putting together the fragments described, and following out the design to the extent indicated by them, there is presented an outline of a considerable portion of the Church. It was entered by a western doorway, with a semi-circular arched top, of at least two orders, moulded and enriched with the zig-zag ornament. From the threshold the Church was approached by a descent of two steps. Within was presented a Nave, measuring 56 feet from east to west, and 20 feet from north to south; a North Aisle, 13 feet in width, including the Arcade; a Chancel of equal width with the Nave, which, in accordance with the arrangement prevailing at the period, would likely be much shorter than the existing one; and there would probably also be a South Aisle, but of this no remains exist.

The Nave was separated from the Aisles by Arcades of four bays, the piers of which were cylindrical, with moulded bases, resting on square plinths, splayed on the top. The eastern responds were shafted, with moulded bases, and recessed and chamfered plinths, raised on pedestals, which received the ends of the steps leading to the high altar; and the arches which joined the piers were pointed, and of two chamfered orders, with a string or hood moulding over them.

Some of the windows of the Abbey were single lights, cuspated at the top, and some were divided into two or more lights by mullions, their tops being filled in with plain and rather heavy cuspated tracery.

The Dormitory extended northwards from the west end of the Church, and was reached by a stair within the North Aisle; its south wall was in line with the North Arcade or nearly so, and its east wall was so situated as to shorten the North Aisle a little as compared with the Nave.

The Church was a small one, and not ornate; it was characterised by the simplicity and chasteness peculiar to the types of Gothic architecture prevalent at the period of its foundation—the period when the greatest number and the grandest of the ecclesiastical buildings in Scotland were erected.

THE COLLEGIATE CHURCH.

At the time of the erection of the Abbey, and from the commencement of the great church building era, about the middle of

the eleventh century until the breaking out of the war of independence, the architecture of England and Scotland was in agreement. The Norman style, in which the earliest churches of the era were built, gradually underwent transition, culminating in Early English, and that again reaching maturity began to undergo change towards the Decorated style, when the progressive development was suddenly checked in Scotland by the breaking out of the war, and for a long time church building there continued in abeyance. Meanwhile, in England, the Decorated style of architecture became matured, and it, in its turn, was superseded by another, the Perpendicular style.

When, about the end of the fourteenth century, Scotland had in some measure recovered from the effects of the war, church building revived. This revival period presented two great changes compared with the earlier epoch. Formerly the Religious Foundations, not Parochial, were chiefly Cathedral or Conventual; now they are Collegiate. The other great change relates to the architectural character of the fabric. The thread of the development reached at the commencement of the war is not taken up, nor is the expanded English type adopted. There is generally found in the churches of the period a mixture of styles, some of the earlier Home forms being introduced along with advanced Decorated, exhibiting peculiarities supposed to indicate French influence.

Our own district furnishes, in Sweetheart Abbey, founded in 1275, one of the latest foundations in Scotland of the earlier epoch; and here, at Lincluden, is one of the earliest of the new order and the revival period.

Archibald, third Earl of Douglas and Lord of Galloway, in the reign of Robert III., abolished the old Conventual establishment at Lincluden, and superseded it by a Collegiate foundation. Although the re-building of the Church receives no historical mention, and is not necessarily implied by the change effected in the order of the Foundation, the remains sufficiently indicate that the greater part of it was about this time re-erected. The architecture exhibited by the remains of the Abbey and that of the remains of the College, appearing side by side, one characterised by simplicity and massiveness, and the other by profusion of richness, points to the intervening of centuries between their epochs; and as the former is distinctive of the time of the early foundation, so is the latter of the epoch of the new foundation.

The heraldry on the walls of the Church also sufficiently attests the connection with it of the Douglas family.

The new building, although it would probably be the design of its founder ultimately to extend it so as to embrace the re-building of the whole Church, had stopped short of completion, and a part of the older erection, the remains of which have been described, continued to exist until the time when the establishment was finally dismantled.

The remains of the Collegiate Church embrace the Chancel, the South Transept or Transeptal Chapel, the South Aisle, and the Sacristy; and two vaulted chambers north of the Sacristy also belonged to this period.

This Church, like that of the Abbey which preceded it on the same site, is of small extent, but it stands out unsurpassed by any of its class for the boldness, richness, elegance, and purity of its architecture.

Externally the noticeable features of the building are—the far projecting buttresses, rising to the height of the side walls unbroken by any intake; the large double base table, extending round the bottom of the walls; the cornice, decorated with richly carved foliage, on the top of the south wall of the Chancel; the well-proportioned pointed windows, enclosed in peculiar and very bold mouldings, hooded, and originally divided by many mullions and rich geometrical tracery, inclining to leaf and flame forms, of which little now remains.

The buttresses are of uniform design, and placed at right angles to the walls, except at the Transept, where they project diagonally from the corners.

The windows exhibit uniformity in some of their parts, and in others much variety. The lights in all cases stand in the centre of the wall, the jamb mouldings are continued on the arches, and their internal and external orders are respectively alike, as are also those of the mullions and tracery, except in the case of the east window of the Side Chapel, where they are dissimilar. The principal mouldings of the Chancel windows and of those of the Aisle are similar, but whereas the mullions and tracery in the Aisle have hollow chamfers only, those in the Chancel have edge rolls in addition, with bases and caps to the mullions. The two windows of the Side Chapel differ from all the others as regards their mouldings, and also from one another. The tracery of the two westmost windows in the south wall of the Chancel corre-

spond respectively in design to that of the two small windows opposite in the north wall, otherwise the arrangement of the tracery has in no two windows been alike.

Internally a much more correct idea of the Church can be formed now than was possible before the carrying out of the recent excavations. Entering at the west end, the plinth or lowest stone of the west respond or half pier of the Arcade is found remaining attached to the foundation of the west wall. The east respond, attached to the west wall of the Chancel, remains entire; and in the floor, which is of pavement, are three blanks where three pillars, no part of which now remains, have stood. The Arcade has been of four bays, its pillars shafted and placed diagonally, the capital of the east respond being moulded only, while that of the west respond, which has now been recovered, is richly floriated; its arches have been segmental, as indicated by a small portion of the eastmost one remaining, and it has extended across the front of the southern projection, which is therefore not properly a Transept, but a side Chapel. The side Chapel and the Aisle have been vaulted over at a uniform height, with groined and ribbed vaulting, and there has been an apartment over the Chapel, probably a *Domus Inclosi*, lighted by a small double window in the top of the gable, and approached by a newel stair within a projection at the angle formed by the Chapel and the Chancel.

Upon the walls of the Aisle and side Chapel remain part of the moulded ribs of the vaulting, supported on shafts with floriated caps and sculptured corbels. A little of the vaulting itself also remains, and it has been constructed of rag-work, that is, small flat bedded stones, in this case half an inch to three inches in thickness, and entirely unhewn, set in thick beds of mortar. An etching by Storer, published in 1805, represents a portion of the vaulting or vaulting ribs as continuing at that time to span the Chapel.

The Chapel is provided with a Piscina in the south wall, where the priest emptied the water in which he washed his hands; on its east wall is a carved image bracket; and there is evident provision for an altar in the circumstance that the sill of the east window, before which it would stand, is at a higher level than that of the south one.

Separating the Nave from the Chancel is the Rood Screen, in this instance of stone, and over it the Rood Loft and the Chancel

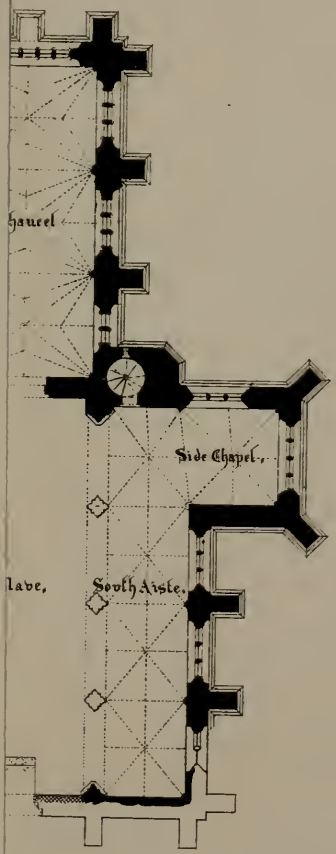
Arch. Under the Rood Loft, on either side of the screen, are corbellings, on the west side of sculptured figures, and on the east of very large leaf work. The Chancel Arch is a segmental pointed one, and the imposts are shafted, with floriated capitals similar to that which had belonged to the west respond of the Arcade.

Entering the Chancel the eastern window is seen to occupy nearly the whole width of the wall and extend upwards to the vaulting. Below the window are corbels which supported the slab of the High Altar, and on its sill is a small carved image bracket. In the south wall are a triple Sedilia or seat for the officiating priest and his attendants, and a Piscina; and in the north wall the tomb of Margaret, Countess of Douglas, all of very beautiful design and workmanship, and in their parts bearing considerable resemblance to one another.

The Chancel was roofed by groined and ribbed vaulting in three divisions, the vaulting shafts and parts of the ribs being still upon the walls. The design has been a very beautiful one, and bore considerable resemblance to that of a later church—Holy Trinity, Edinburgh—of the roof of which Mr T. S. Muir remarks—"A more expressive and chastely designed roof than that over the Choir and Apse is seldom anywhere to be met with. The finely moulded groin-ribs gradually breaking apart from the clustered stems and ramifying along the edges of the various cells, the heavy longitudinal rib with its bold mouldings, and the numerous and variously sculptured bosses, with their jutting bud-like forms and symbolic leafage, produce an extremely rich, graceful, and satisfactory effect."

Over the vaulting of the Chancel, as in the case of the side Chapel, there has been an apartment to which access was got by the newel stair before mentioned, and the apartment was roofed by plainstone vaulting with large chamfered transverse ribs. Of the upper vaulting only a little at each side above the springing remains, but it was complete when Grose visited the ruins in 1789, and an etching by Storer in 1805 represents one of the ribs as then in position.

The Sacristy is a north one, and access to it is by a rich doorway in the wall of the Chancel. There is a descent of three steps to the room, and it has been roofed, in two divisions, by segmental groined vaulting of rag work, with plain chamfered ribs, springing direct from the walls without shaft or corbel.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Side Chapel.
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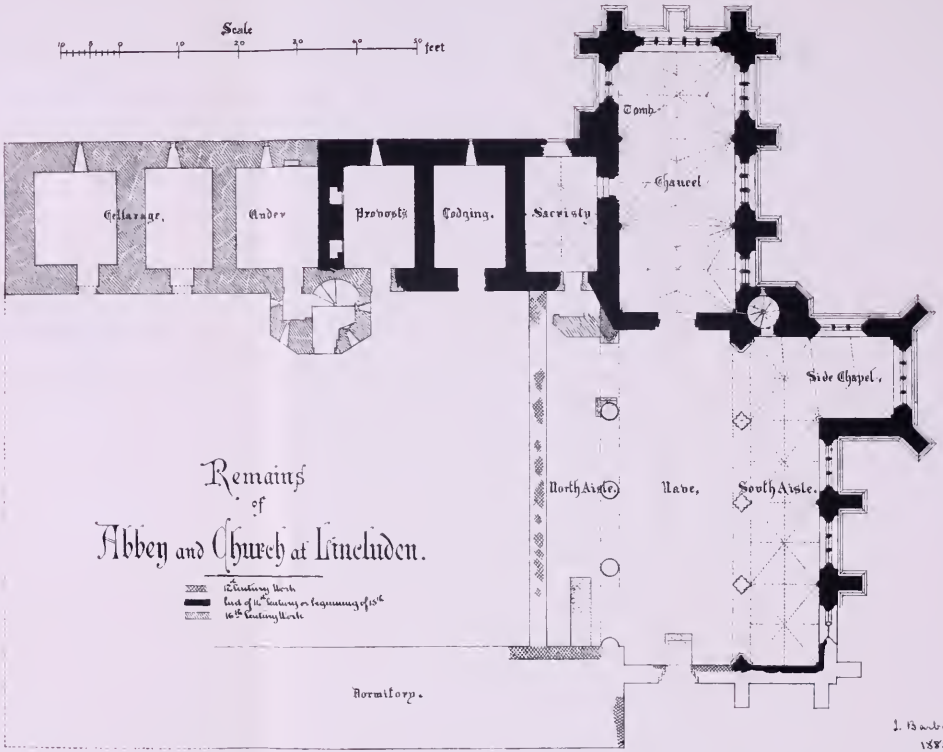
South Aisle.
1885.


Scale
0 5 10 20 30 40 50 feet
Tomb
Chancel
Cellarage.
Cudery
Provost's
Lodging.
Sacristy
Side Chapel.
North Aisle.
Nave.
South Aisle.
Dormitory.
Remains
of
Abbey and Church at Lincluden.
12th Century Work
Work of the 14th Century or beginning of 15th
16th Century Work
J. Barbour.
1885.

Arches.—The Arches are of various forms : that of the eastern window is obtuse pointed ; that of the south window of the side Chapel is segmental pointed ; and those of the remaining windows are equilateral pointed. The doorway of the Chancel is arched square-headed, the corners only being rounded, a form common in France and unknown in England. The Chancel arch is segmental pointed, and the arches of the Arcade have also been of that form. The top of the Tomb is obtuse pointed, almost half round ; the tops of the Sedilia are equilateral pointed ; and that of the Piscina is ogee pointed.

Mouldings.—The hollow chamfer is common. On the jambs of the Chancel and Aisle windows it is very large and a full quarter circle in depth; mostly it is not much sunk. The filleted roll appears to be the predominating moulding. The plain roll is common, and rounded and feathered rolls also occur. The mouldings are strictly geometrical, their orders are few in number, and lie mostly in the wall and soffit planes, and the composition is simple, bold, and effective.

Bases.—The bases of the window shaftings are composed of an elliptical-torus astragal following the plan of the shaft, a bell-shaped ogee moulding, octagonal on plan, on a high octagonal plinth ; and in the case of filleted shafts, the fillets are continued on the bases and plinths. The pier base is composed of an ogee astragal following the plan of the shaftings, a bell-shaped ogee moulding, polygonal on plan, and a low plinth square on plan, with the points cut off, placed diamond ways.

Capitals.—The capitals of the window shaftings have undercut neck mouldings following the plan of the shaft, richly floriated bells, and torus-moulded abaci, octagonal on plan ; and in the case of filleted shafts, the fillets appear on the bells above the carving and stop against the abaci. The capital of the pier is composed of a neck moulding and bell, following the plan of the shaft, and an abacus of two filleted rolls divided by a deep hollow, similar on plan to the plinth of the base. The capitals of the imposts of the Chancel Arch have mouldings similar to that of the pier, and the bells are floriated.

Ornamentation.—The building is rich in floriated embellishments. The tabling of the south wall of the Chancel, the corbelling on the east side of the Rood Loft, and the capitals of imposts and shafts, as has been already indicated, are so enriched, as are also the Sacristy doorway, the Tomb, the Piscina, and the Sedilia.

Ornamental foliage surrounds many of the shields, and many of the bosses of the roof have also borne this description of decoration. Two groups of oak leaves and acorns on the front of the Piscina are closely after nature, otherwise the floriated work is less natural, and many of the leaves are marked by the peculiar well known conventional arrow-head points, the barbs of which are turned round in the form of a volute. The floriations of the capitals of the vaulting shafts are peculiarly free and graceful, and generally all the decorative work is well disposed, sculptured with great boldness, and its effect is rich and pleasing.

SCULPTURE.

Medieval sculpture at this period had obtained its highest development, and in gracefulness of design and beauty of execution it rivalled the works of ancient Greece and Rome. On this small building there is more sculpture, and the work is of greater merit than is apparent at first sight. The figures are so broken and abrased that they have the appearance of rudeness. Many have almost ceased to retain any resemblance to sculpture, and it is only after a careful study of them that some appreciation of their original excellence is gained.

The effigy of Margaret, Countess of Douglas, which lay upon the Tomb, has been recovered. It is broken into two pieces, and so disfigured, that it is with difficulty the details can be followed. The head of the recumbent figure, which appears to have been crowned, rests on two cushions, the hair hangs down in long ringlets, one on either side, and the hands are crossed upon the breast. The lower of the two cushions is oblong, and lies crossways, and the upper one is square, and lies upon the other diagonally, and both are tasseled. Upon the lower part of the dress is a small portion of ornamental detail, the cushions exhibit corded seams, and on one of them is represented minute and beautiful braiding, the whole leading to the conclusion that the figure, instead of being, as it seems on a casual inspection, rude, has been executed in all its parts with the utmost minuteness and care; and without doubt it has been a work of art fitted to cover the remains of a princess and adorn this beautiful Church.

The trunk of another small female figure, much broken, has been found, which also indicates great care and minuteness of

execution, and it probably occupied one of the two image brackets before mentioned.

The sculptured figures upon the west side of the Rood Screen are arranged in rows one over another. The middle row consists of about 18 figures, winged, their hands crossed over their breasts; the upper row represents heads, filling in the triangular spaces between the wings of the figures below them; and the lower row, which is much mutilated, has consisted of 25 to 30 figures, the southmost one holding a scroll, which has been inscribed. The lower sculptures were probably intended to represent the Birth of Our Lord and scenes in His life; and those above the adoration of the Heavenly Host.

Fragments of sculptured slabs have been recovered, evidently pieces of the breast work or parapet of the Rood Loft. The work is 2 feet 9 inches in height; on the face of it is arcading with ogee tops, and in every panel a sculptured figure in low relief. St. Paul is represented resting on a sword; St. John holding in his left hand a cup and pointing over it with his right; a figure holding in the left hand a book and something like a scroll in the right, there is no nimbus, but the face bears a striking resemblance to the usual representations of Our Lord; also another complete figure and a fragment. Over the arcading is some small incised Old English lettering, probably intended to be descriptive of the subjects. The length of the Rood Loft would admit of eighteen such figures, which, added to the three rows of sculpture before described, brings up the picture of this feature of the building to one of great splendour.

The westmost remaining vaulting shaft of the Aisle is supported by a figure; at the angle formed by the walls of the Aisle and side Chapel the vault ribs spring from a pair of figures; and the image bracket in the side Chapel is supported by a figure, winged, and holding a scroll uninscribed. Within the Chancel there are six figures supporting vaulting shafts, all winged; two of them are represented playing upon musical instruments, and two hold uninscribed scrolls.

Many of the bosses of the roof have borne sculptures—the *Agnus Dei* and other symbolic subjects.

The attitude of these sculptured figures on the walls can yet be observed, and through all the mutilation and almost obliteration of detail something of their power is still visible. The way in which they appear to spring from the walls, and support

themselves and the superincumbent shafts with ease, indicate vigorous conception and masterly execution.

HERALDRY.

The heraldry is in better preservation than the sculpture, and therefore it has the appearance of being the predominant decorative adjunct of the building. The charges are beautifully and delicately cut, and the disposition of the shields, along with scrolls and carved foliage, gives variety and relief to forms that otherwise might appear somewhat stiff.

There is no heraldry upon the walls of the Aisle, or side Chapel. This kind of decoration is confined to the Chancel and the Countess of Douglas' Tomb, and all the charges appear to have reference to the founder's family and connections.

On the front of the sarcophagus of the Tomb is arcading of nine panels, in each a shield, and, beginning at the dexter side, the blazonings are respectively :—A saltire and chief, for the Lordship of Annandale ; a lion rampant for that of Galloway ; three mullets, the arms of Murray ; a man's heart, three mullets in chief, for Douglas ; a field uncharged, a field nebuly, a field uncharged, a fess chequy, for Stewart ; and paly.

Over the Tomb, forming a corbel for the support of a vaulting-shaft, is a shield bearing a lion rampant, within a border fleury ; and on the south wall, forming a corbel for the opposite vaulting-shaft, is another shield bearing three fleurs-de-lis, the arms of France, crowned, and with dogs as supporters.

The tympanum of the Sacristy doorway is enriched with two shields, the dexter one bearing three mullets, and the sinister one a man's heart, on a chief three mullets, impaling a lion rampant, crowned. These probably represent the arms of the founder and his wife, although, according to the heralds, the wife's arms should occupy the sinister shield and not, as here, the dexter one.

There are other fourteen shields in the interior of the Chancel. On the north wall, beginning at the west, the first, second, third, and fourth shields are without charges, and attached to them are uninscribed scrolls ; the fifth is a shield couchie, bearing three urchins—the arms of Herries. Sir Robert Herries of Terregles married Margaret, daughter of Archibald Douglas, the founder of the College. The sixth shield on the north wall is uncut.

On the east wall are two shields, the charges of the south one are obliterated; the north one bears three mullets impaling the first within a border fleury, probably for Murray and Douglas. There is on Bothwell Church, of which Archibald Douglas the Grim was founder, a shield bearing similar charges, but in the reverse order.

The remaining six shields are on the south wall, and, proceeding westwards, the emblazonments are—A man's heart, on a chief three mullets, impaling a lion rampant; on a field ermine a man's heart, on a chief three mullets; quarterly, first and fourth, a man's heart, crowned, on a chief three mullets; second and third, a lion rampant, crowned; within a border, quarterly, first and fourth a man's heart, on a chief three mullets; second and third a bend between six cross crosslets fitched, said to be the arms of the hero of Otterburn; on a bend, three mascles, and in the sinister canton a buckle. Round the shield is a scroll, inscribed *Loyal Dei* . . . Halyburton . . . and under it appears the initials J. H. The sixth shield bears a lion rampant.

On the Chancel walls outside are seven shields, three on the south wall, bearing respectively a bend engrailed, three urchins, a saltire between four mullets; two on the east wall, one within a wreath of beautifully cut holly leaves, bearing a saltire, the other bearing a fess chequy debruised by a bend engrailed; and two on the north wall, both uncut.

TOMBS.

The Tomb of Margaret, Countess of Douglas, has been so often and well illustrated and described that it is unnecessary here to notice its design; but in reference to its date, the constructive arrangement of the masonry appears to favour the conclusion that the tomb formed part of the original design, and was carried up along with the wall of the Chancel.

An interesting tombstone has been recovered from the *debris*. It is of red sandstone, measuring 8 feet by 4 feet, and lies in the south-west corner of the side Chapel, marking the grave of Alexander Cairns, the second Provost of Lincluden, who was also Chancellor to Archibald, 4th Earl of Douglas. An inscribed border extends round the four sides, and in the centre is a representation of a tree, surmounted by a shield bearing a fess, and an inscribed scroll, all incised. The stone is broken into three pieces, and the inscribed border is mostly obliterated. What

remains is in Old English character, and reads—"*Hic jacet Magister Alexander de Carnys . . .*" Not being able to read the legend upon the scroll, I sent a rubbing of it to Dr Frazer, and his reading of it is—"*Qui me calcatis pedibus prece subveniatis.*" (You who tread on me with your feet help me with your prayers.) Carnys probably died in 1422, when John Cameron became Provost of Lincluden.

A stone, which forms part of the pavement of the Aisle, and lies immediately west of the corner of the side Chapel, covers a grave. It has been inscribed in Old English character, but no part of the inscription can now be read.

There are two tombstones in the side Chapel besides that of Cairns, and one in the Nave, of after Reformation date. Those in the side Chapel have borders respectively inscribed—"Heir · lyis · ane · honest · man · Alexander · Cooper · Mason · 1 · 5 · 8 · 8;" and "* * · lyis · Robert · Cowper · Mearsone · Bwrgis · of · Drowmfris · 161*." That in the Nave is also inscribed round the border, and on its face is a sinking as if for the reception of a brass; but being much broken, the inscription cannot be read.

Under the east end of the Chancel is an oblong vault, roofed by a plain cylindrical arch, to which access is got by a number of steps descending from the floor of the Chancel. The vault does not appear to have been built along with the Church. Its walls are not under but within those of the Chancel; the character of the masonry is different from that of the Church; the space in the floor of the Chancel occupied by the stair is so large as not to be adapted for being closed by the usual slab, and there is evidence that the vault has been secured by means of an upright door at the foot of the stair, the stair itself being probably left open. The vault was used by the Maxwell's as a place of sepulture, and was probably erected by them after the Reformation for that purpose. John, 8th Lord Maxwell, who was slain at the battle of Dryfesands, as stated in the "Book of Carlaverock," was buried in Lincluden, 30th December, 1593; and, according to the same authority, "Dame Elizabeth Douglas died in 1637, and her son Robert, 1st Earl of Nithsdale, gave her a sumptuous funeral, and afterwards transported her remains to the College Kirk of Lincluden, to be interred in a vault beside those of her first husbaud, John, Earl of Morton."

GLAZING AND FURNITURE.

Fragments of the glass and lead work of the windows have been found. The pieces are small, the glass is corroded, but enough remains to shew that the windows were of a variety of colours, and such as would be in keeping with, and enhance the effect of the rich architecture and sculptured decorations of the Church.

It is a fortunate circumstance that a small part of the stalls of this Church has been preserved. In the "Queer," attached to the Parish Church of Terregles, erected in 1583 by John, Lord Herries, for a place of sepulture for himself and his family, is the piece of furniture referred to, long known as the "Provost's Chair of Lincluden." Any one acquainted with church furniture will not hesitate to pronounce this work to be part of the stalls of a pre-Reformation Church; its architectonic style is in keeping with the Church of Lincluden; and the common connection of the Terregles family with Lincluden and with the Mortuary Chapel at Terregles would account for the removal of the stalls to their present position in the Chapel.

Two of the stalls are nearly complete, except that the back boards and canopies are wanting; and there are parts of a third stall. The work is of oak. The seat boards turn up in the usual way, and have the usual carved miserere, allowed by the Church as a sort of rest for relief to the infirm during the long services that were required to be performed in a standing posture. The points of the elbows are carved, and the back framing rises in a series of buttresses and pinnacles, richly decorated with carved crockets and finials. Carved pieces of the canopies also remain.

A unique circumstance came to light a few years ago respecting these remains. Captain Maxwell had undertaken the restoration of the Mortuary Chapel, within which, against one of the walls, they stood. The stalls being turned round, on some of the remaining boards forming the back, were discovered traces of paintings, two in number, in *tempera*. The more complete one is upon two boards; a third board, upon which a small part of it had extended, is wanting. This painting represents a female figure in a standing posture, the left arm crossed upon the right one. The features of the face are obliterated; the face itself is oval, the hair is yellow and long, hanging down upon the shoulders. On the head is a crown with alter-

nate fleurs-de-lis and short points. The inner garment is of a reddish brown colour, and the outer mantle, which is represented depending from the shoulders and arms in graceful folds, has a yellow border ornamented with lines and roundlets—probably the mantle itself has been blue—and the inner lining is white, representing a fur. The cloak is shown secured about the neck by a yellow band, and a ring through which the band passes.

Of the second painting only a small portion remains. The head, and the hair, which is yellow, can be made out, but the face is obliterated. The cloak has been of a reddish brown colour with a yellow border. The left hand holds a cup, and the right one is represented pointing over it.

There is little doubt that the female figure represents St. Mary, to whom the Church was dedicated; and the other figure is a representation of St. John the Evangelist, as appears by the symbols. It will be observed that the symbols of St. John on this painting and on the sculptured stone slab, formerly referred to as part of the Rood Loft, are similar.

THE PROVOST'S LODGING.

The portion of the ruin known as the Provost's Lodging extends northwards from the Sacristy. The basement consists of five vaulted cellars. The first floor appears to have contained a square apartment at the north end, and the remainder of the floor formed probably the Great Hall. The second floor contained a north room, and the space over the hall would be divided into several rooms. The north part of the building only was carried up a third floor, forming a square tower with crow-stepped gables. The entrance door opened upon the octagonal staircase, and the stair gave access to the several floors. One of the cellars was entered from the staircase, and the other four by outside doors in the west wall. The windows of the rooms have been principally in the east wall, and would overlook the well formed gardens, the scarped mound attached to the place, the meeting of the waters, and an extensive tract of country beyond.

The octagonal Tower, most of the walls of the square Tower, and the greater part of the west wall extending between the square Tower and the Church existed in 1805. Now only the lower parts of the walls of the octagonal Tower, the Cellars, and the square Tower, to about half its height, with a piece of one corner of it of greater height, remain. The two cellars adjoining the

Sacristy appear to have been erected at the same time as the Church, the hewing being similar to that of the Church; the vaulting also being of rag work. The workmanship exhibited in the other portions of this part of the ruins is different and inferior, and quantities of slates and other material, which have belonged to some former building, are found embedded in the walls; the mouldings also are dissimilar to and of later date than those of the Church. Grose states that William Stewart, who was Provost about 1530, either rebuilt or greatly repaired the Lodging. Stewart's arms, which have been recovered, appeared upon the octagonal Tower, and a carved corbel, which was also upon the Tower, has been found bearing the initials of his name, V. S.

DEMOLITION.

A few words will suffice in reference to the demolition of the fabric. The after Reformation tombstones are proof, I think, that the building had, as early as 1588, become open and waste, and a place of common burial.

When Penant visited the ruin in 1772 the upper vaulting of the Chancel was standing; it had nearly disappeared in 1805, and now no part remains except the springings; and a small part of the vaulting spanned the Side Chapel in 1805, which has long since fallen. With these exceptions, the Church is now in much the same condition as it was in 1772; even the Tomb appears to have been then broken and abrased as it is now.

Considerable changes have, however, taken place on the Provost's Lodging since 1772. The west wall, a great part of the square Tower, and the octagonal Tower have fallen, the latter in 1851, as described in Mr M'Dowall's "History of Dumfries."

It is worth notice, regarding the influences at work, in connection with the dilapidation of the College, that the Heraldry, the insignia of the ruling class, remains uninjured, while the figure-sculpture, which at the Reformation was regarded as tending to idolatry, is ruthlessly mutilated.

This Collegiate Church—a little Cathedral in which the sumptuous service of the Cathedral, but on a smaller scale, was wont to be celebrated—has been, as its remains testify, complete in its structural parts, and in its accessories also; and the *tout ensemble* is one of remarkable magnificence. The architecture exhibited is pure, no reverting to Early English, and nothing dis-

tinctive of the Perpendicular appears. The form of the Chancel door, the design of the window tracery and some of the mouldings, and the shield bearing the Arms of France, suggest French influence; but the architecture of Scotland at the period being indigenous, the forms were probably derived from several sources; their combination is exceedingly satisfactory.

Standing in the Nave, and looking eastwards, on the left hand would appear the more ancient Arcade and Aisle, the remains of the Abbey Church of Uchtred; on the right the less ancient Arcade, Aisle, and Side Chapel; and in front the Rood Screen and Loft, and the Chancel Arch, the former adorned throughout its length with a wonderful array of pictorial sculpture representing the birth of Our Lord and incidents in His life, and the Adoration of the Heavenly Host; also single figures of Our Lord, St. Paul, St. John, and many others. Through the opening under the Chancel Arch would be seen the beautiful groined vaulting of the Chancel roof, its ribs springing from shafts, with floriated capitals, resting on bold sculptured figures, and its multitudinous points of convergence united by bosses, moulded and embellished with leaf work and symbolic sculptured forms—one the *Agnus Dei*. Within the Chancel the High Altar, with its carved bracket and statue would meet the view; the Piscina, Sedilia, Tomb, and Priest's Door, all extremely rich in mouldings and sculpture or floriated ornamentation; the numerous Shields, with their heraldic devices and floriated surroundings; and the Oak Stalls, with beautifully carved ends, miserere, pinnacling, and canopies, and pictorial paintings of St. Mary and St. John, nearly life size. And in all places would be seen the beautiful traceried windows, filled with painted glass, serving to suffuse the Church, and combine and soften its parts with brilliant and varying hues of light.

4th April, 1884.

Dr Gilchrist, President, in the Chair. Forty members present.

New Members.—Messrs R. Barbour, St. Christopher's, Dumfries; J. Craig, Solicitor, Dumfries; J. Patterson, The School House, St. Mungo, were elected Ordinary Members; Mr R. Turner, Glasgow, an Honorary Member.

Exhibits.—Mr F. Armstrong exhibited, on behalf of Mrs Hutton, a large silver coin of the Mexican Empire of Maximilian. Dr Gilchrist exhibited fine specimens of the lily *encrinite*, obtained by Mr Macfadzean at Matlock. Mr J. J. Clark exhibited two large cases of European shells, and several species of star fishes and sea urchins. Dr Grierson, Thornhill, brought for exhibition a number of natural history specimens, which he had recently received from South America. One of these was a monkey—name of species unknown—a little larger than the common one, having a very small round head, covered with light brown hair, and the body, legs, and arms densely coated with dark brown, almost black. He had shown it to Professor Traill, Aberdeen, who had failed to classify it.

Communications.

I. *Orchardton Tower.* By Mr J. Matthewson.

A short paper on this subject was read by Mr Barbour, in the absence of the author. Various measurements were given, and details of the structure; but as Mr Matthewson purposes describing it more fully at a future meeting, these particulars need not be given here.

II. *Surnames.* By Mr T. Brown, M.A.

After examining the modes of naming adopted by our Scandinavian ancestors, into whose nomenclature the wolf and the bear enter largely, as types of ferocity and sagacity, he referred to the patronymics of ancient Greece and Rome, of the Hebrews, and of the European nations of the present time; and showed how the personal characteristics contributed largely to swell the list of surnames.

III. *A Geological Sketch of Annandale.*

By Mr George Johnstone.

The Chairman read this communication, in which the author made particular reference to the northern portion of the district referred to in the title, and illustrated his remarks by a chart showing the different rock formations. The district is, said the writer, about twenty miles in length, and about eight in breadth, and is surrounded on three sides—N., E., and W.—by hills of Silurian origin. Within this area the Silurian rocks appear frequently at the surface—*i.e.*, along the banks of the Annan and its tributaries. The dip of the rock is generally about 80 deg., while at one place in the River Milk it is almost perpendicular. The Old Red Sandstone is found in the Burnswark group of hills, extending about five miles in length and about three-quarters of a mile in breadth. This rock is remarkable for the great quantities of white pebbles which it contains, and is similar in appearance to the Old Red Sandstone found on the shores of the Firth of Clyde. Burnswark itself is of volcanic origin. All the hills possess the peculiar rounded appearance of the glacial action, and the smaller elevations in the valleys show, where sections have been made, the unmistakable evidence of the boulder clay.

Summer Programme.—This being the last meeting of the Session, the following programme of the Field Meetings was submitted by the Secretary and adopted:—May—To Wood Castle, Spedlins Tower, Corncockle Quarry, and Raehills Glen. June—To Calkerbush, Southwick, and Douglas Hall. July — To Moniaive by Dunscore, returning by Barjarg lime-stone quarries. August—Neighbourhood of Moffat. September—Dornock, Kelhead, returning by Lochmaben. It was reported that the following members would, in connection with the excursions, prepare information for the members, or describe the places, &c., visited, viz.:—Dr Gilchrist, in Geology; Mr Wilson, Botany; Mr Barbour and Mr J. Lennox, Archæology; Mr Maxwell, Fungi; Mr Lennon, Entomology; Mr Davidson, Mineralogy; and Mr Chrystie, Ornithology.

21*st June*, 1884.

Dr Gilchrist presiding. Fifty members present.

A Special Meeting of the Society was held on this date at Two p.m., in Lincluden Abbey, to afford the members an opportunity of seeing the different parts of the ruin which had been uncovered by the recent excavations carried on by Captain Maxwell. Messrs Barbour and M'Dowall were present, and pointed out the different points of interest in the building, and gave a short account of its history. (For detailed description see the *Proceedings* for 1st February, 1884, and 7th March, 1884.)

In the earlier part of this month (June) extensive alterations having been made on Mr Muirhead's property at the foot of Friars' Vennel, the Committee visited the site on the 7th and 12th, with the view of examining some objects of antiquity laid bare by the excavations, and, if considered desirable, to carry the explorations further at the Society's expense. Mr Barbour was requested to watch the operations, and to collect sufficient data, if possible, to finally settle the disputed question concerning the number of arches which the Old Bridge originally had, and to report at a future meeting.

The following communication on the subject was read at this meeting :—

The Dimensions of the Old Bridge of Dumfries.

By Mr J. Barbour.

Following out the wishes of the Committee of this Society, I beg to make a short statement in reference to certain masonry found in the course of excavations at Mr Muirhead's property, Bridge Street. The old buildings on the south side of the narrow street, which extends between Bridge Street and Brewery Street, at a point exactly opposite the Old Bridge, were demolished to make way for improvements when in the course of excavating the foundations, the masonry referred to was brought to light. The Committee of the Society resolved upon an investigation, and with permission of the proprietor of the building site, and of the Town Council, they continued the excavations to the extent considered necessary.

The work, when cleared, was carefully examined, and I have, as desired, taken measurements of it and prepared drawings, which I exhibit.

The masonry consists of a wall starting from the east side of Bridge Street, and extending eastwards 10 feet 5 inches, thence in a direction south-east 6 feet 3 inches, and again eastwards 40 feet 4 inches, terminating in a line with the Brewery Street end of the buildings lying on the north side of the narrow street before mentioned. The depth at which the wall is founded varies, being upwards of 10 feet below the surface at Bridge Street, and 4 feet below the surface of the water in the river at the bridge, 4 feet below the surface at Brewery Street, and 6 feet midway between these points. The top line of the wall is also irregular, and the work varies in height from 9 feet or more at Bridge Street to about 4 feet at its centre, and $2\frac{1}{2}$ feet at Brewery Street; and it measures about 3 feet in thickness. The masonry is solid and strong. It is composed of the red sandstone of the district, well cemented together with lime mortar in which is a mixture of shells, and it is faced on one side, the south one, with hewn ashlar, in regular courses about 11 inches in height. The westmost part of the wall is in a line with the south side of the Old Bridge.

At a point $27\frac{1}{2}$ feet east of Bridge Street the wall is pierced by the remains of a culvert 4 feet 3 inches wide, the floor of which is 9 inches below the surface of the water in the river opposite. The opening continues northwards beyond the thickness of the wall, under the narrow street; its sides are of ashlar, similar to the facing of the wall, and rest on flat projecting foundation-stones, the edges of which are splayed and hewn like a base course; and its top appears to have been closed by arching.

The west end of the masonry is terminated by the remains of a large arch. Only the south end of the arch could be inspected, and it showed a projecting springing course, 12 inches in height, splayed on the top, and thirteen thin arch-courses, their thickness being about 6 inches. The arch ring is about 18 inches deep, and its angle is chamfered; it is of good and tasteful workmanship, and in excellent preservation.

I have now described the masonry, and I may be permitted to express the opinion that it has formed the east abutment of the Old Bridge built by Lady Devorgilla in the 13th century, which is known to have been originally of much greater magnitude than the six arches which still span the river.

In order that the full original dimensions of the Bridge may be

understood, I beg to submit the following measurements:—The existing Bridge consists of six arches, and beginning at the Maxwelltown side the dimensions are—1st arch, 32 feet 4 inches wide; 1st pier, 15 feet 2 inches wide; 2d arch, 27 feet wide; 2d pier, 14 feet 6 inches wide; 3d arch, 28 feet 2 inches wide; 3d pier, 15 feet 2 inches wide; 4th arch, 27 feet 9 inches wide; 4th pier, 15 feet 2 inches wide; 5th arch, 27 feet 7 inches wide; 5th pier, 15 feet 1 inch wide; 6th arch, 35 feet 5 inches wide. Total between the abutments, 253 feet 4 inches. The distance between the face of the east abutment now found and the west side of the sixth pier, which now forms the east abutment, measures 113 feet 2 inches, and deducting the width of three piers, 68 feet remains, which would give three arches of 22 feet 8 inches span each.

It follows that the old water channel of the Nith in the 13th century measured 366 feet 6 inches across, between the abutments of the bridge; that the bridge, including its abutments, extended to at least 457 feet, and it was a 9-arched structure. The remains also show that provision had been made in the east abutment for a mill lade in connection with the old Sandbed Mill, which was bounded on the north by the bridge, and was not above the bridge, for the culvert is at too high a level to have been the tail race.

On the motion of Dr Gilchrist, a vote of thanks was heartily awarded to Mr Barbour and also to Messrs M'Dowall and Starke for the trouble which they had taken in connection with the Bridge and the Abbey.

SESSION 1884-85.

3d October, 1884.

ANNUAL MEETING.

The Annual Meeting was held in the Freemasons' Hall, High Street, on the above date, when 22 members were present, and the President, Dr Gilchrist, occupied the chair.

New Members.—Mr M. G. Wallace, Terreglestown, was elected an ordinary member; Mr W. K. Robertson, of Edinburgh, and Dr Grant *Bey*, of Cairo, corresponding members.

Donations.—The Secretary announced the following donations:—Vol. II., Part III., of the Transactions of the Glasgow Archæological Society, from that Society; the Annals of the New York Academy of Sciences, Vol. III. Parts I. and II., and the Sixteenth and Seventeenth Annual Reports of the Trustees of the Peabody Museum, from the Smithsonian Institution; Postold Sögur, Kong Christiern den Förstes 1448-1458, Krystallographisk—Chemistrie, Classification der Flachen, Vœxtlivet i Norge Etudes sur les mouvements de L'atmosphère and Myntifundet fra greslid i Thydalen, from the University of Christiana.

Exhibits.—Mr Rutherford exhibited a bronze celt found at South Cowshaw, Tinwald. Mr J. Wilson exhibited 40 specimens of the rarer plants found by him during the summer months, among which were—*Teesdalia nudicaulis*, from Locharbriggs; *Valeriana dioica*, from Fernieclough; *Epipactus latifolia*, from Carnsalloch, Kirkmahoe; *Genista anglica*, from Craigend, New Abbey; and *Andromeda polifolia*, from the Lochar Moss. Dr Grant exhibited and described a number of Egyptian antiquities, including rings, bracelets, bandages of mummies, pieces of papyrus with hieroglyphic writing, and several sacred beetles of the Egyptians—*Scarabœidæ*.

On the motion of the Chairman, the thanks of the Society were awarded to the donors and exhibitors.

The Secretary laid on the table "The Official Year Book of the Learned Societies, 1884," which he had been instructed to purchase.

Secretary's Report.

The Secretary (Mr J. Rutherford) submitted the following report:—This being our annual meeting, it will now be my duty to lay before you a resumé of our proceedings during the last twelve months. Eight years have now nearly passed since the present Society was instituted, and it is very gratifying to find that the interest taken in the work—not only by its members, but by the general public—still continues. Scarcely a week passes without my being told by some one outside the Society that they "read with much interest the reports of our Society's meetings which appear from time to time in our local newspapers." I have little hesitation in saying that these excellent reports have been in a great degree instrumental in increasing our popularity, prosperity, and usefulness. At the beginning of the Session we had a membership of 197. During the Session 27 new members have been added; 20 from various causes have ceased to be members; 4 gentlemen have taken advantage of the new rule which was introduced during the Session constituting life members; and the roll now stands—Life members, 4; honorary and corresponding members, 15; ordinary members, 185—making a total of 204, being an increase of 7 during the Session. We have had the usual seven monthly Winter Meetings and five Summer Field Meetings. The average attendance at the Winter Meetings was 31·5, as against 34 in the preceding year; the average attendance at the Field Meetings was 20·4, as against 26 in the previous year. Although these figures show a slight decrease in the attendance at our meetings during the past Session, yet when we consider that we have had three Special Meetings, all well attended, we have no reason to doubt that the interest hitherto manifested in the work of the Society has in any way fallen off.

I regret to tell you that during the last Session we have lost from our locality our most distinguished coleopterist, of world-wide reputation, who has removed to Southampton. I refer to Dr Sharp, whose pleasing disposition and kindly manner endeared him to all who had the honour and pleasure of his acquaintance. At our monthly Winter Meetings fourteen papers were read, being the same number as the preceding year, and some of which were of a high-class nature. During the Session we have had six Committee Meetings, with an average attendance of 8·6. A

Sub-Committee was appointed to prepare the Society's proceedings of the past three years for publication, and get the same printed. This has been done, and by next meeting they will be ready for distribution.

The following specimens have been deposited in the Observatory Museum :—5th October, 1883—Collection of Mounted Charæ ; Ammonite and other Fossils ; December 26th—Silver Coin of Charles I. ; Catalogue of Antiquities in Brussels Museum ; Parmeliæ ; Par in spirit with salmon disease ; List of Foreign Correspondents to Smithsonian Institution ; Two old Books, dated 1682 and 1744 ; April 9th, 1884—Six Copper Coins, and one large Silver Mexican Coin. There still remains in the hands of the Assistant Secretary and other members the other books which have been presented during the year ; in the hands of the Secretary, the large Collection of Lichens and Mosses presented by Mr M'Andrew ; and in the hands of the President, the Geological Collection which was presented by himself, and for which there was no room in the Museum at the time. In closing this necessarily brief and imperfect report of our year's work, again allow me to express the hope that the same interest will continue to be manifested in the work of the Society as hitherto. There is no doubt whatever, that as we continue to pursue the study of nature, we will find that she gradually reveals herself in proportion to our application, and the result will not only be the acquirement of a certain amount of information, but there will be a great subduing of self, and an elevation of Him who created all things and pronounced them "very good."

The Treasurer (Mr James Lennox) submitted the following account of the funds of the Society :—

Income.				Expenditure.			
Balance from Session 1882-83	£7	3	10½	Secretary's Outlay	£6	9	4
4 Life Members' Subscriptions	8	8	0	Treasurer's do.	0	5	3
145 Ordinary Members' do.	18	2	6	R. Johnstone for Printing	3	1	0
18 New Members' do.	4	10	0	Rent of Halls	2	10	0
Transactions Sold	0	1	0	Subscriptions in arrear and not paid	0	7	6
				Balance due Society ...	25	12	3½
	£38	5	4½		£38	5	4½

"Audited and found correct."—(Signed) G. H. Robb.

These reports having been cordially adopted, the Secretary and Treasurer were awarded votes of thanks for their honorary services.

The Election of Office-Bearers for the ensuing Session was next

proceeded with, when Dr Gilchrist was re-elected President, and, on the recommendation of the Committee, the number of Vice-Presidents was increased to five, and the following were elected, viz.:—Sheriff Hope, Messrs J. Gibson Starke, J. M'Andrew, J. Barbour, and W. M'Dowall.

Mr Rutherford having expressed his wish to resign the Secretaryship, proposed Mr J. Wilson to be his successor, which was unanimously agreed to. On the motion of Mr Neilson, a hearty vote of thanks was again awarded to Mr Rutherford for his valued services during the past two years. Mr R. Barbour was elected Assistant Secretary in the place of Mr S. Chrystie, resigned. Mr J. Lennox was re-elected Treasurer; and the following gentlemen members of Committee :—Messrs J. Rutherford, John Maxwell, J. Neilson, T. Watson, R. Chrystie, G. H. Robb, W. Adamson, J. Davidson, A. Innes, and J. C. M'Lean. Auditor—Mr W. Bailey.

The ordinary business of the meeting having been concluded, Dr Grant gave an interesting address on "Egypt: its Language, its People, and its Antiquities," in which he lucidly traced the history of that country from the 18th Dynasty (1600 B.C.) to the Turkish Conquest in A.D. 1517, and the different races which peopled it during that period.

On the motion of the Chairman, Dr Grant was awarded a hearty vote of thanks for his address.

7th November, 1884.

Dr Gilchrist, President, in the Chair. Thirty-five members present.

Donations.—The Secretary laid on the table the 13th Annual Report of the South London Microscopical and Natural History Society, from Mr P. Gray; thirteen pamphlets from Mr G. F. Black on the Spinning Gear of former times, a Cist with an Urn from Park Hill, the Earldom of Caithness, Stone Implements from Shetland, Sculptured Stones from Monifieth, the Caves near Dysart, a collection of Flint Implements found at Fourdoun, remains of the Red Deer, Bronze Weapons found at Killin, and others.

Exhibits.—The Chairman exhibited a patent electric apparatus used for lighting lamps, &c., and Mr Rutherford described the

mechanism and the principle on which it was constructed. Mr Rutherford exhibited two photographs of the supposed cup-markings on the two largest stones in the Holywood circle. Mr M. J. Stewart, M.P., sent for exhibition a dozen specimens of the natural grasses grown on his farm at Southwick. Two specimens of the common clover measured thirty-eight inches in length, and the common meadow grass over four feet, while the tall fescue grass—*F. elatior*—extended to the length of six and a half feet.

Communications.

I. *Notes on the Druidical Circle at Holywood.*

By J. Gilchrist, M.D., President.

Having been in the vicinity of Inverness for a few days during summer, I had an excellent opportunity of examining those so-called cup-markings, which are specially well-known in that district. Recently I revisited the Holywood circle along with three gentlemen, two from Inverness — Dr Aitken, medical superintendent, and Mr Ross, architect — both familiar with these interesting relics of a people unknown, dwellers in a prehistoric age. Dr Grant-Bey, from Cairo, was also with us. The object of the visit was, if possible, to determine whether the so-called cup-markings on the Holywood stones were natural or artificial. They are found on two of the eleven stones still standing—viz., the one next the entrance gate from the west, and the fifth from the gate looking east. A careful examination of all the stones was made, but especially of the two latter, when it was concluded that the markings in both were natural. With this judgment I am disposed to agree as regards the fifth from the gate; but I am more dubious with regard to the first, and would rather leave it to be settled by one having authority. I believe Dr Dickson, late of Dumfries, and one of the founders of this Society, was the first to notice these markings, and read a paper on them a few years ago. They were visited by the late Professor Simpson, and quite recently by the Rev. Mr Lukis, the latter in the interest of the London Antiquarian Society. I may add that I re-examined the stones geologically. They are all silurian—that is, the rock which constitutes the hilly ridge on each side of the Nith valley—except one; that one is a so-called porphyry. Again, of the whole number, including the porphyry, four are boulders—that is, masses which have been

brought from a distance, rounded and polished by water and ice. These might have been obtained at or near the spot where they stand, but the seven others have been detached from the living rock by some ancient quarrying process. The nearest point where such rock could be obtained is the hills in the vicinity of Irongray Church. An increasing interest attaches to these curious cup-markings, as it is now ascertained that they are not confined to the north of Scotland, nor even to Britain, but are to be found all over the world. Their object and use is yet unascertained.

II. *Notes on the Ancient Bronze Implements and Weapons in the National Museum of Antiquities in Edinburgh.*

By Mr G. F. Black.

In this paper the writer gave a detailed description of a few typical forms of ancient bronze implements, &c., and the only local specimen referred to was a bronze knife-dagger, found near Glenluce by the Rev. G. Wilson. This specimen, Mr Black says, measures 3 inches by $1\frac{1}{4}$ at the butt. The point is broken, and the tang is a good deal wasted, but still bears the mark of the heft. The blade is two-edged, and slightly bevelled at the edges. It is the only one not actually found in connection with an interment; but as fragments of urns were found in the sand near it, there can be no doubt that it was connected with a burial.

III. *Notes on Local Ornithology.* By Mr W. Hastings.

As far as my observation has gone, this last season has not been very productive of much that can properly be called rare in the bird line, although I have had a number of curiosities in their way. In the month of December I had a fine specimen of a young barn owl—*Aluco Flammeus*—brought me. It was covered with beautiful white down, a very unusual time for the barn owl to have its nest; and at the time I received it, it would not be above three weeks old. In the beginning of May this year, I received a nice specimen of a white crow, and a few days later I got a specimen of a blue one, both curious. I have before had specimens of the white, but never of the blue; of course, they were both young birds. About the beginning of last month I received a specimen of the snow-bunting—*Plectrophanes Nivalis (L.)*—which was much earlier than I had ever seen them before.

They do not usually leave their breeding ground in the far north until they are compelled to do so by stress of weather. I lately received a specimen of the shoveller duck—*Spatula Clypeata*—which is by no means common in this district. The male bird of the shoveller is very beautiful. I have thought it strange that all the specimens I have had killed in the district have been females. About a month ago, I had a barndoor fowl brought me which had every appearance of a good-sized domestic cock in full plumage, with large spurs—as large, indeed, as is commonly seen upon a large game cock. The lady that brought it assured me that it was a hen, and a good layer of eggs until it assumed the male dress, when it stopped laying. I have seen many instances of the hen taking the plumage of the cock, both among pheasants and black game; but never before one that came so completely up to the mark as this one. Last week, I had a fine specimen sent me of a pure white partridge. I have before had specimens of the partridge of a dun colour, but never one anything like so white as this one. At the same time I received a fine specimen of the grey or silver plover—*Squatarola helvetica*—which seems to be scarce in this district, as it is the second one I have ever had in all my time. It is much about the same size as the golden plover, but differs in having a very small hind toe, which in the golden is altogether awanting. In the spring it assumes quite a different dress from what it has in winter, but it is a very handsome bird in whatever dress it may appear. This morning I had a fine male blackbird brought me, with a pure white head and neck. I have had specimens mottled all over, black and white, also with white head and tail—all the rest black. Last month I had a good specimen sent me of the marten cat, the only one I have ever had from this district. It is somewhat longer and more slender than the pole cat, and has not the offensive smell of the latter. The pole cat is now extinct in this quarter, the trapping of rabbits, upon which it naturally preys, having been the means of killing it out, as it got into traps that were not intended for it. The marten cat is not uncommon in the pine forests of the north, but this is the only one I have ever had in the flesh. There seems to be no end of hawks, owls, and squirrels, which are coming in more plentiful than ever.

IV. *Remarks on the recent Additions to the Flora of Dumfriesshire and Galloway.* By Mr F. R. Coles. (Abstract.)

This paper dealt with such records of new stations and of new species as were strictly additional to those given in the "Flora" compiled by Mr M'Andrew in 1882.

Approximately, 120 new stations for plants of such uncommon occurrence as—*Ligusticum scoticum*, *Valeriana dioica*, *Galium cruciatum*, *Campanula latifolia*, *Pyrola minor* and *P. secunda*, *Scrophularia Balbisii*, *Orobanche major*, *Lycopus Europæus*, *Utricularia intermedia* and *U. minor*, *Epipactis latifolia*, *Listera cordata*, *Typha latifolia*, and *Cladium mariscus* were recorded.

The following list comprises all the authentic new species :— Under *Ranunculus aquatilis*, which, in the Stewartry, at anyrate, is a frequent inhabitant of slow streams, ponds, lochs, and marshes, we have *R. peltatus* var. *truncatus* and var. *floribundus; R. diversifolius* var. *Godronii*, *R. Drouetti*, *R. trichophyllus*, and the variety of *R. peltatus* known as *fissifolius*.

With the addition of *Cochlearia anglica* near Creetown ; *C. danica* at Colvend ; the vars. *littoralis* and *alpina* in Borgue and Shinnel Burn districts respectively, the entire group of the Scurvy grasses is represented.

Among *Violaceæ*, the substitution of the *V. sylvatica* (Fries.) as the correct name of the plant recorded as *canina*, and generally so-called, led to the establishment of its sub-species, *flavicornis* (Forst.) and *Riviniana*, which, though a real gain of two new plants, set us a-hunting for the true Linnæan *V. canina*. Mr Coles was fortunate enough to find a few specimens of this much rarer species on the banks of the Dee below Threave. *Polygala depressa* is frequent on the coast of Kirkcudbright.

Of *Caryophyllaceous* plants, there were only two to notice— *Cerastium semidecandrum*, found by Rev. J. Fraser in Colvend, and the rare annual form *pentandrum* of *C. triviale*, found by Mr Coles at Ravenshall. A very interesting discovery was made on an excursion by Messrs M'Andrew and Coles among the Carsphairn hills, where, in a mossy old ditch, some 1800 or 1900 feet high, specimens of the var. *integrifolia* of *Saxifraga stellaris* were collected, a form hitherto known only on Ben Wyvis.

Of the genus *Callitriche*, we now had *C. platycarpa* (Kütz.), *stagnalis* (Scop.), *hamulata* (Kütz.), and *autumnalis*, *L.* in Kirk-

cudbrightshire. *Epilobium obscurum* (Schrib.), *Filago germanica*, *Centaurea nigra* var. *radians* are all additional.

Of *Hieracia*, *H. corymbosum* and *H. tridentatum* are observed in plenty in the Kenmure district by Mr M'Andrew; and a form supposed by Prof. Babington to be *H. vulgatum* was collected by Messrs M'Andrew and Coles on lofty rocks in the Carsphairn hills in July of this year. Many other species in this difficult genus should be found in Dumfriesshire.

A curiously dwarf and broad-leaved Centaury, noticed by Messrs Robert Watson and Coles on the Borness shore, proves to be the var. *B. capitata* of *E. centaurium*; it is deceptively like the *E. latifolia*.

Linaria minor, near Lochmaben Station (F. W. Grierson); *Veronica montana*, *L.*, in great abundance in St. Mary's Isle (R. Watson); forms of *Mentha officinalis* (under *M. piperita*); and what may prove a transitional form between *M. hirsuta* and *M. pubescens* were noted this season by Mr Coles, who had also *Rumex conglomeratus*, and the following Pondweeds to report from his own district:—*P. mucronatus*, *Schrad.*, in Carlingwark Loch; *P. Zizii*, M. et K., in the Tarff, where also *P. lucens* var. *acuminatus* and *P. prælongus* luxuriate; *P. pusillus* var. *tenuissima*, in great quantities in a mill dam in Kelton. With *P. pectinatus* and *P. lucens*, collected by Gray many years ago, our total of Pondweeds reaches to 15.

A notable discovery by Mr Coles was made in regard to *Allium carinatum*, *L.*, which much-discussed species he found in August this year growing vigorously, and with every appearance of its being native, on the shrub-entangled shingle of what is known as the shore of "the Lake" below Kirkcudbright. After careful scrutiny, in conjunction with Mr Robert Watson, Rector of the Kirkcudbright Academy, of the locality, and a detailed correspondence with Mr Ar. Bennett, F.L.S., Croydon, weight of opinion seemed to lie on the side of the *Allium* being very probably indigenous in this place (and equally so in the vicinity of Closeburn, Dumfriesshire, where Mr Watson had known the plant to exist for three years.) This was found to have been planted by Dr Grierson.

Juncus obtusiflorus, Ehrh., of which the only record was so far back as 1837-44, is found by M'Andrew in a new habitat in Colvend, who also confirms the station for *Carex aquatilis* var. *Watsoni*, Syme.

Plants, interesting as the sole representatives of their genus in Britain, or on account of some special local reason, have been now discovered as follows: — *Subularia aquatica* (F. R. Coles), in shallow reaches of the Dee below Threave; *Teesdalia nudicaulus*, in the Holm Glen by M'Andrew and at Locharbriggs by Wilson; *Alsine verna*, mentioned in the Flora as lost since 1864, was rediscovered in Colvend on an excursion of the Society in 1882; *Orobanche rubra* (M'Andrew), in Colvend; *Centunculus minimus* (Coles), in Kelton; *Malaxis paludosa* (M'Andrew), in Colvend; and the rare and beautiful grass, *Calamagrostis lanceolata*, was found undoubtedly native by M'Andrew this year (1884) for the first time for Scotland; "its most northern station known for certain," says Mr Bennett, "being Cheviotland in N. Northumberland."

The *Characeæ*—not included in the Flora at all—prove to be fairly numerous. In two seasons Mr Coles had found the following species:—*Chara fragilis*, Desv., near, if not quite, the typical plant, rarely, in clear pools of the Glengapp water, Tongland; the variety *barbata* is the commonest form, being frequent in small streams and sheep drains on the moors in the middle of Kirkcudbright; var. *brachy-phylla*, as yet noticed in only one locality, close to the sea on Muckle Ross cliffs; var. *capillacea*, local, but very luxuriant in a mill dam in Kelton; the var. *delicatula* is credited by Messrs Groves to Mr M'Andrew—locality unknown.

Chara polyacantha—This strange and very uncommon plant Mr Coles found in fair quantity in a turbid peaty loch on Culdoch Moor, Kirkcudbright. *Nitella opaca*, with one or two subspecies, is fairly common in ponds and ditches, while a very beautiful and characteristic form of *N. translucens* grows in Meiklewood Loch, Tongland.

Among Filices, Mr Coles records several new stations for *Hymenophyllum Wilsoni*; Mr Wilson for *Cystopteris fragilis*; Mr M'Andrew finds *Lastrea spinulosa* in the Glenkens woods, and a very striking variety of the common bracken, having the points of each pinna attenuated and then forked, sometimes quinquefidly; grows in Compstone Wood (Coles, October, 1884), Kirkcudbright.

Looking at the Flora as a whole, it was pleasant to note so few actual errors, but still there were some plants admitted whose identity, habitat, and distribution were all somewhat lost in

uncertainty. It might be as well in a second edition to omit such; meanwhile there was no doubt that the sentence of excision should be passed upon the following:— *Viola Hirta, Elatine Hexandra, Trigonella ornithopodioides, Melampyrum sylvaticum, Lysimachia nummalaria, Tofieldia palustris, Juncus Balticus, J. castaneus,* and *Elymus arenarias:* while for such species as *Alchimella Alpina, Myriophyllum alterniflorum, Arctostaphylos uva-Ursi, Paris quadrifolia* (at Dundrennan), and *Allium scorodoprasum,* later authentic records are much required.

Much work still lay in the genera *Rubus, Rosa, Hieracium, Mentha, Salix, and Chara*; and the *desideratum* of keen observers, especially in the hillier parts of Dumfriesshire, was still felt.

In conclusion, the writer urged all those interested in Botany to verify all reports of species, and to forward specimens, with particulars, at once to Mr M'Andrew, whose responsibility it was their duty to lighten as much as possible.

5th December, 1884.

Mr J. Gibson Starke, Vice-President, in the Chair. Thirty members present.

New Members.—Mrs Barbour, St. Christopher's; Mr W. T. Craig, solicitor, Dumfries.

Donations.—The Secretary laid on the table Vol. I., Part IV., of the Proceedings of the Perthshire Society of Natural Science; Vol. III. of the Transactions of the Essex Field Club, as donations from the respective Societies; also a Roman Copper Coin found at Liverpool, and presented by Mr Henderson of that city.

Exhibits.—Dr Gilchrist exhibited sixteen specimens of Norwegian Minerals, and Mr J. Shaw a fine specimen of Opal from the Giant's Causeway.

Communications.

I. *Ancient Modes of Sepulture.*

By Mr J. Gibson Starke, Vice-President.

II. *Notes on the Flora of Upper Nithsdale, and additions to the Flora of Dumfriesshire.* By A. Davidson, M.B.

When at Thornhill in the summer of 1883 Mr James Fingland and I, in collecting botanical specimens for our herbarium, made

a systematic exploration of the district in our neighbourhood. This year, though my migration to Sanquhar severed the partnership so mutually beneficial, Mr Fingland has continued and extended his exploration of the district, so as to include the parts surrounding Dumfries; while I have in my leisure hours prospected the Sanquhar and Kirkconnel parishes; and the combined work has resulted in the discovery of about 200 new localities for these plants already recognised denizens of the county, and 46 new species or varieties. The main field of investigation may roughly be said to include the whole valley of the Nith from Dalswinton to Kirkconnel. Time will not allow my treating this subject in the complete manner it ought to be done, so I will confine myself to the positive aspect of the question; and, taking the local Flora as my guide, I will first of all enumerate some of the new localities for the rarer species, with short references to those plants common elsewhere perhaps, but rare in Nithsdale; and in the second place, consider those new to Dumfriesshire.

Naturally the *Ranunculi* is first of all to be considered. *Ranunculus Flammula*, sub-species *reptans*, recorded as growing at Lochmaben, has been mistaken for var. *pseudo-reptans*, a very much more common plant; though the only other locality where I have found perfect specimens is near Garrich, Thornhill. *R. hirsutus* was found at Ruthwell by Mr Fingland. I show here a specimen of the yellow lily from the Black Loch, Sanquhar, and I think there is no doubt it is *Nuphar intermedia*, not *N. pumila* Sm. The Celandine, *Chelidonium majus*, as an escape, is well established in a few places at Thornhill and Carronbridge. For *Corydalis claviculata*, one new locality, Cleuchhouse Linn, Keir, has been added; and Ruthwell locality has been confirmed by J. Fingland. *Arabis thaliana*, *Barbarea vulgaris*, and *Cardamine amara* may be considered fairly common, the latter particularly so. On the rocks in the Dalveen Pass we found *Arabis hirsuta* in a good few places. In Loch Mailing, Auldgirth, and Lochmaben the marsh rocket, *Nasturtium palustre*, is not unfrequent. The common scurvy grass, *Cochlearia officinalis*, rare as an inland plant, grows in fair abundance in Camplecleugh, Water of Æ, and Euchan. Of the *Caryophylleæ*, three only require to be noticed—*Lychnis vespertina*, which is not uncommon in the Thornhill district, and the variety, *puberula* of *Silene inflata*, found in a wood near Thornhill and near Cample. In a field near Sanquhar, I this season gathered the only specimens of

Githago segetum I have yet seen. The variety *Riviniana* of the wood violet is very common, but *Viola canina* has not been found.

The wood stitchwort *Stellaria nemorum*, generally a somewhat rare plant, grows plentifully in the woods from Auldgirth to Drumlanrig; and the rare *Sagina nodosa* favours only the Pass of Dalveen.

Geranium sylvaticum, though generally twice as rare as *G. pratense*, is in all Nithsdale very common; while *G. pratense* is comparatively rare. The shining crane's-bill, *G. lucidum*, given in the Flora as an escape, grows in Clauchrie Glen and Cample, on rocky, not easily accessible, spots, and may be considered undoubtedly indigenous; in some other places it is, however, not so.

The pretty *Genista tinctoria* we found in two localities only, Scaur Water and Campleslacks, and the *Genista anglica* only at the New Loch, Thornhill. *Ulex Gallii*, Mr Fingland observed this season near the Brow Well, Dumfries. *Vicia Orobus*, recorded in the Flora Scotica as growing near Sanquhar, has been found abundant in Euchan Glen; and in the valley of the Crawick, on the opposite side of the Nith, a large patch of the beautifully pencilled vetch *V. sylvatica* was found. For *Rubus Chamæmorus*, *R. saxatilis*, and *Saxifraga hypnoides* many new localities could be given. The pretty starry Saxifrage, *Saxifraga stellaris*, grows in bright profusion on the Caple at Queensberry; in a few places in Clauchrie Glen *S. granulata* was discovered. *Chrysosplenium alternifolium* and *Sedum villosum* are both more common than might be supposed. Among the epilobes *E. angustifolium* as an escape grows in abundance near Sanquhar, and in a few places on the hills of Dalveen and Cample. *E. hirsutum* is, however, rare, being only found in two places near Thornhill. Friars' Carse marks the northern limit of a good few plants, such as *Lythrum Salicaria*, *Cicuta virosa*, *Lysimachia vulgaris*, *Scutellaria galericulata*, and *Solanum dulcamara*. For *Helosciadium inundatum* and *Œnanthe crocata* a good few new habitats have been allotted, the latter being in many parts somewhat common, while *Æthusa Cynapium* and *Daucus Carota* can only claim two localities each north of Auldgirth. The common hemlock Mr Fingland found this year at Carlaverock and Lochmaben, but was in neither place abundant. In the Drumlanrig and Sanquhar woods the *Viburnum Opulus* is frequently to be

met with, and in two places the rare *Sambucus Ebulus* finds a quiet retreat. On the banks of the Nith *Galium cruciatum* and *G. boreale* are frequently met with, the latter in great abundance. In Euchan Glen the melancholy plume thistle, *C. heterophyllus*, is very common; while in Crawick, its only other station, it is rather scarce. *Bidens cernua* favours only the common loch, Thornhill. The yellow Leopard's bane, *Doronicum Pardalianches*, grows in abundance at Nith Linns, and also, although less so, at Morton Mill. *Crepis paludosa* has been found in Nith Linns and Camplecleugh, the specimen from the latter place being *unicephalous*, a variety Mr A. Bennett has not hitherto met with. *Campanula latifolia*, *Pyrola minor*, and *Symphytum tuberosum* is fairly well distributed; the latter, I think, is probably indigenous in the Nith below Holmhill. *Symphytum officinale* is somewhat common and general. At Sanquhar Castle a few plants of *Anchusa sempervirens* still flourish. Mr Fingland has reported the presence of *Erythræa littoralis* near the Brow Well as probably a new species for Dumfries. The wood betony, *Stachys Betonica*, though abundant on Euchan and the Nith as far as Elliock Bridge, has not been discovered elsewhere. *Galeopsis versicolor* is not uncommon in Moniaive, Sanquhar, and Thornhill parishes. *Lamium amplexicaule* has only been found in one locality, near Sanquhar. On the railway embankment near Birscar a few plants of *Verbascum Thapsus* were seen, and on the broom all around Auldgirth and Glenmidge the *Orobanche major* may be considered common.

Polygonatum multiflorum no longer grows at Tibbers Castle, but a few specimens still maintain their ground in the wood near Thornhill. Whether the *Sparganium*, simply found in a few places near Thornhill, is new to Dumfries cannot be decided by reference to the local Flora. At Ronaldstoun and Glenmidge, Auldgirth, and a few other places, *Potamogeton rufescens* is not uncommon.

Scirpus sylvaticus is very common in many places on the Nith and *S. acicularis* was found this season at the Townfoot Loch by Mr Fingland. The local Flora is, I find, no true record of the Dumfriesshire Carices. *Carex dioca*, *muricata*, *curta*, *hirta*, *remota*, *lævigata*, and *sylvatica* may all be considered common. For *C. paniculata* two new habitats are recorded. *C. vesicaria* has been found in only one place, at Kirkbog, Thornhill. Loch Urr is a new habitat for *C. pauciflorœ*. *C. teretiuscula*, given as

occurring at Thornhill, has evidently been mistaken for *muricata*, which differs somewhat from the usual type standing somewhat intermediate between *muricata* and *pseudo-divulsa*.

A few lines will dispense with the grasses. *Milium effusum* I found this season in Crawick Glen; and in two new localities, Nith Linns and on the banks of the Nith above Elliock Bridge, I have gathered *Poa nemoralis*. *Festuca Myurus* is pretty common, and must have by mistake been noted in the Flora as rare.

For the wall rue and black maiden-hair ferns a few new habitats have been noticed. Of the hart's tongue a scattered remnant is still to be found on Cample, Nith, Aird's Linn, and in Dalveen Pass. The brittle bladder fern may be found in almost all the sub-alpine glens, and in Carron Water is most abundant. *Ophioglossum vulgatum*, the adder's tongue fern, has been found near Moniaive. The green spleenwort is almost extirpated from Euchan Glen, and will probably soon be extinct. Of the club mosses *Lycopodium clavatum*, *alpinum*, and *Selago* are represented.

The critical genera I have wittingly passed over, as I wish to refer more particularly to these species apparently so little studied. The *Batrachian ranunculi* have been examined by Mr Fingland, and the following we are enabled to record:—*Ranunculus peltatus*, var. *truncatus* and *floribundus*; *R. diversifolius*, var. *Godronii*; *R. Baudotii*, var. *confusus*, all new to Dumfriesshire.

My investigation of the roses has led to some important additions. *Rosa spinosissima*, rare as an inland plant, I found at Elliock Bridge on the Nith. A glandular variety of *R. tomentosa* is very common at Sanquhar. The following are all new additions:—*Rosa molissima* varieties, *mollis* and *cærulea*; and *R. canina*, six varieties, viz.—*Lutetiana*, *dumalis*, *Reuteri*, *subcristata*, *Borreri*, and *arvatica*. I may here record my indebtedness to Mr Arthur Bennett, without whose kind and unstinted assistance I would have been unable to define these varieties. I am also much indebted for his help with many other species. Three new Callitriche have also been added, viz.—*hamulata*, *platycarpa*, and *stagnalis*.

Next come the willows. Of *Salex pentandra* a few plants have been found on the Nith near Sanquhar, and in Ellioch, Drumlanrig and Kirkconnel woods; and strange to say all were male specimens. It would be interesting to observe if the Gallo-

way plants, or those found in other parts of the country, present this peculiarity. *S. Caprea*, *cinerea*, *aurita*, and *purpurea* are common. The following are additions:—*S. phylicifolia*, var. *Davalliana* and *tenuior*; *S. nigricans*; *S. triandra* and *Salix cinerea*, var. *aquatica*. Two new carices—*C. pendula* and *C. aquatilis*, var. *Watsoni*—fall to be added.

I gathered four different brambles, and after vainly endeavouring to decipher them I sent them to Professor Babington, who found some difficulty in naming them, as the specimens sent were not very carefully prepared. The names accorded them he did did not wish to be considered perfectly correct; nevertheless I think it better to give them. They are—*Rubus Koehleri*, *plicatus ramosus*, and *carpinifolius*.

So far, although close attention has been paid to the *Hieracia* (Hawkweeds), I have been unable to discover any other than the two commonest—*H. vulgatum*, var. *nemorosum*, and *H. murorum* —and I am somewhat surprised that this part of the shire can show no other varieties in an order where varieties are so numerous. *Nitella Opaca* and *N. translucens* are the only representatives of the Characeæ found in the district.

It now remains to briefly notice the few remaining plants not hitherto, or only doubtfully, recorded as natives of Dumfriesshire. First on the list comes *Thalictrum majus*, var. *flexuosum*, found in a few places on the Nith above Drumlanrig. *Dianthus Armeria*, hitherto unknown in the south west of Scotland, I discovered near Auldgirth, in a locality that almost excludes any chance of it being an escape. *Potentilla procumbens* is not uncommonly met with at and south of Auldgirth; while *P. reptans* has not been met with. In Cleuchhouse Linn, Keir, and on the Nith near Sanquhar, a few specimens of *Geum intermedium* have been found. *Hypericum hirsutum*, previously only reported from Kirkcudbright, appears in many places on the Nith. *Ornithopus perpusillus* and *Malva moschata* also claim to be considered natives. The varieties, *palustre* of *Taraxacum officinale*, *Leontodon hirtus*, and *Leontodon autumnalis* (var. *pratensis*), fall to be added to the list of compositæ. *Galium Mollugo* I gathered near Sanquhar; and on the Nith near Thornhill specimens of *Dipsacus sylvestris* and *Polygonum Bistorta* were found. *Polygonum amphibium* and *Peplis portula* may also be noted as probable additions. The only new *potamogeton* is *P. pusillus*, var. *tenuissimus*, which Mr Fingland found growing adundantly

in Townfoot Loch, Thornhill. Three new grasses — *Avena flavescens*, *Festuca pratensis* (variety *loliacea*), and *Glyceria Aquatica*—close the list of flowering plants. Last and rarest of all I have to record is *Equisetum pratense*, abundant in Crawick Glen and on the Nith near Elliock.

III. *A Visit to the Giant's Causeway.* By Mr J. Shaw.

IV. *Dates of First Blossoming of Plants in Tynron.* By Mr J. Shaw.

In submitting a list of plants first noticed in blossom in months of April, May, June, and July, Mr Shaw remarked that April, 1884, showed flowers about a week earlier than April, 1883. Cold winds in March, 1883, blighted an early blossom, and threw vegetation back. In May, 1884, the number of flowering plants observed was 70. This was a no greater number than that observed in May, 1883. May, 1884, got a better start, but did not keep up in the race. With some difficulty it waved a hawthorn blossom at us before parting, which was so far beyond what its sister of 1883 had done. June is undoubtedly the flower lovers' favourite month. The drought and barren winds of last June filled the farmers' minds with gloomy fears. Vegetation halted. Our list presents 87 as against 113 of the preceding June. The Fox-glove was not seen with us this year in June at all. Many of the Orchis species lagged a week or fourteen days behind. Just as in 1883 plants that are wont to appear by the middle or end of May were crushed forward into June, so in 1884 many June blossoms were held over to July. The wayside roses, which appeared in 1883 in the middle of June, began to unfold this year a week later. In July the number of plants in both years in blossom was about 100. Vegetation quickened rapidly with the fine weather of this month. Still, by comparison, blossoms were behind their time. The heather, which began to bloom with the opening days of the month in 1883, was only observed for the first time about the middle of July, 1884, to the distress of those bee-keepers who wished to profit by its flowers. Still, by the end of the month, July, 1884, had well-nigh got abreast of July, 1883. The blue bells waved in the same week in both; and some of the late flowering grapes, and several hawkweeds, are registered as appearing with only a few days difference in each.

2nd January, 1885.

Dr Gilchrist, President, in the Chair. 28 members present.

Donation.—The Transactions of the Berwickshire Natural History Club were laid on the table as a donation from that Society.

Exhibits.—Mr Starke, V.P., exhibited a copper-plate engraving of the Old Bridge of Dumfries. Mr Rutherford exhibited two cases of Caddis-flies, lent by Mr R. Service to illustrate Mr King's paper.

Communications.

I. *Notes on some Trichoptera from the Stewartry.*

By Mr J. J. King (Corresponding Member).

On March 6th, 1880, a paper entitled "Notes on a Collection of Trichoptera from the Stewartry," by Mr F. G. Binnie, was read before your Society. At various times since then Mr Service has forwarded to me some small collections of caddis-flies, among which I find 17 species that have not been recorded from the Stewartry; indeed, one species is new to the Fauna of Britain. These, along with the species recorded by Mr Binnie, bring up the number to 47 species in all, which is somewhat less than one-third of the species recorded from Britain. No doubt if a little more attention were paid to this much-neglected and interesting group of insects, the number might be very much increased, as I notice the absence of many common species, such as *Limnophilus centralis*, *L. vittatus*, *Micopterna lateralis*, &c., that must occur in the Stewartry.

I might here ask the entomologists of the Society to collect any caddis-flies that they may come across during the incoming summer; by so doing they will materially assist Mr Morton and myself in a list of the caddis-flies of Scotland which we are about to publish in the *Scottish Naturalist*. Caddis-flies require no further attention in preparing them than do the Lepidoptera. In the following list the species new to the Stewartry are indicated by an asterisk. The arrangement followed is that of Mr M'Lachlan in his "Revised List of British Trichoptera," published in the Transactions of the Entomological Society of London, 1882:—

Phryganeidæ.—*Phryganea grandis, L. Phryganea varia, F., common—Maxwelltown Loch, &c.

Limnophilidæ. — Colpotaulius incisus, Curt. — Dalscairth. Glyphotælius pellucidus, Retz.—Dalscairth, Portland. Limnophilus marmoratus, Curt.—common—Portland. Limnophilus rhombicus, L.—Maxwelltown Loch. *Limnophilus flavicornis, F.—Maxwelltown Loch. Limnophilus xanthodes, M'L.—Maxwelltown Loch (some of the varieties of this species are very handsome). Limnophilus lunatus, Curt.—common. *Limnophilus affinis, Curt. *Limnophilus extricatus, M'L.—very common at Dalscairth and Maxwelltown Loch. Limnophilus luridus, Curt. —Dalscairth. *Limnophilus sparsus, Curt.—Portland. *Limnophilus fuscicornis, Ramb. (one specimen was taken of this somewhat scarce species). Anabolia nervosa, Curt.—Dalscairth. Stenophylax stellatus, Curt. —very common—Maxwelltown Loch and Dalscairth. *Micropterna sequax, M'L. (a few specimens of this species were obtained). *Mesophlax impunctatus, M'L. (this interesting addition to the British Fauna was taken within the Stewartry ; for details see "Entomologists' Monthly Magazine," XX. pp. 19-20, indicated as M. aspersus, var.) Halesus radiatus, Curt.—common. *Halesus digitatus, Schrank.

Sericostomatidæ.—Silo palipes, F.—Dalscairth. Lepidostoma hirtum, F.—Maxwelltown Loch.

Leptoceridæ.—*Leptocerus aterrimus, Steph. ; common—Maxwelltown Loch and Dalscairth. *Leptocerus cinereus, Curt.— Maxwelltown Loch and Mabie. *Leptocerus commutatus, M'L. —Dalscairth (a very good character by which the female of the species may be separated from that of *albifrons* is the snow-white space towards the tip of the antennæ, which is very conspicuous ; this white space is entirely awanting in the antennæ of *L. albifrons*).

Hydropsychidæ.—*Hydropsyche pellucidula, Curt.—Dalscairth. *Philopotamus montanus, Donov.—Mabie. *Plectrocnemia conspersa, Curt. Polycentropus flavomaculatus, Pict.—Drungans. *Tinodes Wæneri, L.—Dalscairth.

Rhyacophilidæ.—Glossosoma Boltoni, Curt.—Mabie. *Glossosoma vernale, Pict.—Dalscairth.

II. *Notes on the Town's Common Mills and their History.*

By James Barbour, Vice-President.

The Mills belonging to the town of Dumfries, situated on the Maxwelltown side of the river, a little below the Old Bridge, are

sombre and unpicturesque buildings, but their principal accessory, the mill-dam, adds much to the beauty of the river. It forms a broad waterfall, and gives depth and a lake-like appearance to a reach of the river, which bends round the north-west portion of the town, and extends as far as Lincluden, reflecting at once on its smooth surface the ruins of that ancient Church and Devorgilla's venerable bridge.

These Mills occupy the site of older buildings of the same kind, which were erected there in the year 1705, when Matthew Frew, according to the terms of the contract between the parties, undertook "to construct and build ane good and sufficient complete and well-going water-miln, for grinding of malt, meal, and flour, or anie grain whatsomever, with dams, wearis, sluices, watergangs, taledams, and hail othir pertinents." The Caul is specified to extend "from that part of the rock on the Galloway or Troqueer side, opposite to Baillie Fingusse's barn, in the Whitesandbeds, up to the Dumfries side of the Nith opposite to the entry or passage to the Water of Nith at the foot of ye Freesvennell, or opposite ye back of the house pertaining to James Boyd, merchant;" and it is designed to be constructed of wood: "Which Caal or Dam is to be made of staicks of red oak, fixed into the rock through the Water of Nyth, at two foot distance one from another, or thairby, and holes to be digged into the rock fit for beating down and fixing each stake, or stoup thairin; and which staickes are to be supported by stoupis of oak fastened into ane oaken soale, throw the Water of Nith, at the back of the said staiks or stoups; and the said staiks or stoups are to be lyned with good full firrdales, close plain-seamed on the upper syde and nailed to ye said stoupes." The water-gang is to be 160 feet in length. The Mill is to be built upon "that rock opposite to the entry into Provost Irving's yeard at the head of the Cunningham's lands pertaining to the Toun of Dumfries." The Tail-dam is to be "1200 foot in length or thairby, down from the said miln to that rock in the rack opposite the heid of ye Willies." Frew binds himself to begin the work the 8th of April, 1705; to end the same at Martinmas next to come, under penalty of 1000 merks Scots; and to uphold the Mill, Dam, &c., seven years. The total contract price is 3000 merks Scots, payable by periodical instalments of 360 merks each. The contractor comes in the Town's will for any further payment, over and above the stipulated price of 3000 merks. He

is to have liberty to dig and win stones for the said work out of the Town's quarries not already opened. His needful travelling expenses during seven years' upholding to be satisfied by the Town.

Some of the entries in the Town's accounts further indicate the quality of the buildings, and also serve to illustrate the current rate of wages at the time :—

Novr. 1706.			
Payd for 18 burdings of whins (for Caul) at 8d ye burden	£0	12	0
Alexr. Glen for 8 draughts of stones for the Call ...	1	12	0
John Anderson for 7 draughts	1	8	0
John Neilson for 7 draughts	1	8	0
Gawaine Carlile for 7 draughts	1	8	0
Novr. 20.			
Arther Grahme for 3½ days at the New Mills, by Bailey Ewert's order, at 7s per day	1	4	6
William Car 4 days at the New Dam	1	8	0
John Duf 3 days	1	1	0
John Neilson and John Anderson for 2 cairts from Carlaverock with wood for a wheel	4	0	0
To Bailey Ewart, be paid for timber for a wheel ...	5	0	0
To Bailey Corbet given Wm. Mean in earnest when they agreed for bigging of a kill	0	14	6
Nov. 27.			
For 5 Threeves & ½ of Thak to ye Mill, be Bailey Barkles order	0	16	0
To a Theaker for putin on the Thak of ditto	0	7	6
Feby. 25, 1707.			
Hew Roddick and John Turnor for casting and leading ye turffs and rigging the New Miln, per Coun: order	12	0	0
March 1.			
Thomas Macjore for whins brought to ye Town's Caul by him, &c.	2	8	0

All Scots money.

Altogether the picture presented of this Mill, with its walls built of rough stones, which had been dug out of the site of the existing Kilns, and its thatched roof ridged with turf, exhibit Frew's "model" as an unambitious one; and the Caul made of wood must have served its purpose very imperfectly if we are to judge by the quantities of whins and stones with which it had to be supplemented.

The progress of the work undertaken by Frew was interrupted by a law plea. Shortly after its commencement, the proprietors of the upper fishings opposed the construction of the Caul, by presenting a bill of suspension in the Court of Session. The case was ultimately decided in the Town's favour, and the mill was completed in 1707, when it was let to a tenant, along with another water-mill belonging to the Town, situated in the Mill-hole.

In the year 1780 Frew's mill was destroyed by fire, and the existing buildings were erected on the same site the year following, under the direction of an eminent engineer, John Smeaton, designer of Eddystone Lighthouse and many other great works, whose life forms one of the most interesting and instructive of the biographies contained in "Smiles' Lives of Engineers." Smeaton was born at Ansthrope, near Leeds, in the year 1724, and he died in 1792. He had been consulted by the Magistrates of Dumfries on other matters beside the Mills. "One of the earliest subjects on which Mr Smeaton was consulted," says Mr Smiles, "was the opening up of river navigation. In 1760 he reported to the Magistrates of Dumfries as to the improvement of the Nith, but his advice—to form a navigable canal rather than deepen and straighten the river at a much greater cost—was not carried out for want of funds." The drawings for the mills furnished by Smeaton are among the Town's papers.

Before the erection of Frew's Mill, the Town possessed, on the Dumfries side of the river, a water-mill, situated in the Millhole; another water-mill, called the "Sandbed Mill of Dumfries;" and a horse-mill, the site of which is now occupied by part of the west side of the Brewery, at the head of Brewery Street.

We have no record regarding the erection of any of the three mills on the Dumfries side of the river, but there is evidence of the existence of buildings of this description in the Town at an early period. There is mention of "Adam the Miller" about the middle of the 12th century, when Richard, son of Robert, was arraigned for his murder in the Castle of Dumfries; and in 1307, the Castle being in the hands of the English, command is sent, on behalf of the King, to James de Dalileghe at Skymbernesse to provide wheat and barley, and have it ground at Dumfries.

Later we have reference to a mill-dam, in such terms as to indicate its locality. In a Charter, by the King, dated Dumfries, 10th October, 1510, confirming the Charter which William Cunninghame, Burgess of Dumfries, had previously granted to the Parish Church of Dumfries (St. Michael's) of certain houses and lands within the Burgh of Dumfries, mention is made of—"8/ from the tenement of Shir Finlaii Makgilhauch, Chaplain; 4/ from the Orchard of the said Chaplain, hard by the mill-dam; 12/ from the tenement of the late John Steill, situated between the mildam and the Clerkhill."

Both the water-mills on the Dumfries side were such as would now be considered extremely primitive. They were small buildings, their roofs—in common probably with the greater part of the town at the time—covered with thatch; and as early as 1661 the walls of the Sandbed Mill had become insecure. The Town's Minute Book, under date 10th November of that year, bears :—"Councell ordains the public Treasurer publicklie to cause theik the Towne Milns with strae, and to cause under-prop the wall of the Sandbed-mylne until the Spring."

A little further information may be gleaned, as to the character of the old mills, from statements made, and evidence taken, in the dispute, already referred to, between the Fishery proprietors and the Magistrates. The former represent that the Sandbed Mill, in lieu of which the projected one was being built—"Is of so little use to the Town that she had not been, these eighteen or twenty years, agoing;" and that—"The Town did not require a new milne, they having both a horse-milne and a water-milne besides." On the other hand, the Town Council say that—"Where they were building ane Damm or wall through the water of Nith to serve in ane milne which is also building, for grinding of malt to the inhabitants of the burgh, who are thirled thereto, through that part of the water of Nith belonging to the Town of Dumfries in Property and Superiority, above a stone-cast below a milne and wall and Damm which the Town had upon the same water, which still was sanded and broke with speats and torrents of the water," and further that they "had not the use of any Horse Milne, nor has had this long time, and for their Water Milne she had [gone] about three months of the winter season or thereby, and they have not any going milne at present." The Witnesses deponed that—"The Town of Dumfries had a milne dam dyke quite through the water of Nith to the Galloway side from the Sandbeds Milne, about 5 feet high above the ground, made up of stain and creills, without lime, but sometimes stopped with fog, and the water was never equal with the said dyke in the summer time except in a great speat."

The Sandbed Mill disappeared long ago, but its situation is described in the Town's Titles as at the east end of, and hard upon, the Bridge of Dumfries, and as extending to Homer Maxwell's house, which stood below the Bridge.

Last year extensive remains of the east abutment of the Old Bridge were discovered underground, between Bridge Street and

Brewery Street, and it was found to be pierced by a culvert, evidently part of the lade or "watergang," for leading water to the Mill.

The structural connection thus found, linking together the Mill and the Old Bridge, suggests the theory that the two structures were built together by a common founder, and that, in accordance with ancient custom, the Mill was attached to the Monastery as well as the revenues of the Bridge; and the theory derives further support from the terms of the Town's Titles to the Mills.

A Minute of Council, of date 25th Feby., 1656, bears:— "Ordains to be put in their Town's box William, Lord Hereis, and Sir William Maxwellis Seisin in the Sandbed Mylne with the Laird of Gribtoun thereanent regestrat in the Bukes of Counsell to the burgh. Item, Robert M'Briar, his Disposition to Thomas M'Briar and his Spouse to the Burgh of the Mylnehole Mylne." The extract shows that the Millhole Mill was acquired by the Town from Thomas M'Briar; and with reference to the Sandbed Mill and the Town's rights generally, the Magistrates, in the dispute with the fishery proprietors about the erection of the Caul, produced their Titles, of which the following is an outline:—

"Ane Chartour made and granted be King James the Sixth in favors of the Provost, Baillies, Toun Councell, and Communitty of the Town of Dumfries, and their successors, of All and hail the ferms profits, &c., and others of the hail lands, tennendries, houses, biggings, orchyeards, yeards, crofts, and others, fishings which pertained to the brethren of the said burgh commonly called Greyfriers. Together with the half of the customes imposed on the said burgh and others incumbent and deu and payable to the said brethren. Also, All and hail the lands, tenements, houses, biggings, annuities, fruits, profits, emoluments, given and mortified to the said brethren, pertaining or which should pertain to them within the paroch Church of the said burgh, as the said Charter, of the date the 4th day of January, 1591 years bears.

"Ane Instrument of Seasine of John Maxwell of Gribtone, bearing him to be infeft in ane malt milne, situate on the river bank at the east end of the Bridge of Dumfries, with houses, milne, waters, water-gates, with sequels, astricted multures, and their pertinents, lying within the territory of the said burgh of

Dumfries, as the said Seasine of the 26th day of October, 1629 years bears.

"Ane Disposition made and granted be John Maxwell of Gribtoun, heritable proprietor of the Malt Milne and others therein specified, and Jean Richardson, his spouse, to and in favors the Provost, Baillies, Councill, and Community of the burgh of Dumfries, &c., All and hail the malt milne pertaining heritably to the said John Maxwell, bigged and constructed upon the Sandbeds at the east end of the bridge of Dumfries, with the milne houses, waters, water-gangs, damms, with the thirled and astricted multures, sucken sequels, and hail pertinents thereof whatsomever, &c., as the said Disposition, of the date the 25th day of October, 1630 years bears."

There is another Deed among the Town's papers, which, so far as I am aware, has not been before referred to, and it supplies the link which directly connects the Mill and the Church. It is in Latin, and is endorsed in an old hand on the back—"William, Lord Hereis, instrument of Seasing the Sandbed Mill of Dumfries," and dated 10th November, 1589. From this document we learn that Lord Herries acquired the Mill from the Rev. Thomas Maxwell, who was the last Vicar of Dumfries.

The following is a full outline of the text :—"Herbert Raining, one of the Bailies of the Burgh of Dumfries, as representing the Superiors of the burgh-lands—the Provost, Bailies, Council, &c., of Dumfries—grants Seisin to the Reverend Maister Thomas Maxwell, Vicar of Dumfries, and his heirs and assignees, All and whole the under written portion of the said foreshore, or river bank, which forms an integral portion of the common lands of the Burgh of Dumfries. The date of the Charter granted Maister Thomas being at Dumfries, 20th March, 1588, granting him Seisin of a portion of those burgh-lands, commonly known and described as the Over Sandbed, upon the water shore or bank of the river Nith there adjoining, &c., and hard upon the stone bridge of the same river, &c., extending longitudinally as far as the contiguous gable wall of the house, which has been built upon the same river-shore, or bank, and which is the property of Maister Homer Maxwell [Here the pertinents are described in terms similar to those before quoted from Sir John Maxwell's Disposition] in feu and heritage, the said Thomas to pay merks, usual money of Scotland, by equal portions, at two terms of the year, at the Feast of Pentecost and Martinmas, in name of feu-farme.

"And the said Maister Thomas Maxwell, Vicar of Dumfries, for certain causes, &c., resigned all his rights into the hands of Herbert Raining, as the deputed representative of the Superiors —the Provost, &c., of the Burgh of Dumfries—in favour of and for a new Seisin to be granted to a noble and potent lord, William, Lord Hereis, and Dame Cathrine Kar, his Spouse, &c. In presence of Roger . . . Burgess of the said Burgh; Hugh Maxwell, son of John Maxwell in Logane; William Maxwell, brother of the said John; Herbert Hunter, servitor to the said Lord; John Maxwell and David M'Math, servitors to the said burgh, Witnesses, &c.

"Herbert Cunynghame, of the diocese of Glasgow, Notary Public, and Writer and Notary in the Burgh of Dumfries.

"Signed and confirmed by James Rig, also Notary Public."

There is no Writ showing in what way the Vicar himself became possessed of a property of this peculiar description, but little doubt can be entertained that it would be as part of the income of the Vicarage, to which he had been presented by James VI., 1st July, 1579.

It appears then that the Sandbed Mill adjoined the east end of the Old Bridge, and was connected structurally with it in such a way as to show that the two buildings had been erected contemporaneously and together; that the Town derived their rights in the Mill from the King's Charter granting them the possessions of the Brethren of the Greyfriars (as they did the Bridge dues), and a Disposition in their favour by John Maxwell of Gribton, to whom the property descended heritably from his grandfather, William, Lord Herries, who again acquired it from the last holder of the Vicarage of Dumfries. The Church, the Bridge, and the Mill are thus linked together as parts of a common design. The great benefactress of the district in the 13th century, Lady Devorgilla, founded the Greyfriars' Monastery in the Town. She connected her province of Galloway with the Town of Dumfries by a stone Bridge of imposing dimensions, granting its revenues for the support of the Monastery. And it now appears probable that she also erected the Sandbed Mill at the end of the Bridge, its revenues, like the Bridge dues, being piously devoted to the Church.

No description of building is more frequently mentioned in medieval documents than mills. "Perhaps," says Mr Cosmo Innes, "one of the oldest adjuncts to a barony—one of the most

grievous oppressions of the peasantry. It is often amplified by the addition *cum multuris et sequelis*, specifying that the multure dues of the baron's mill and the *sucken*, as we call the population thirled to the mill. These rights are the subject of very frequent transactions. The neighbours fought not only with the miller, who was the universal enemy, but with each other as to their *roume* and order of service. One curious point of the service of the sucken was the bringing home of the mill-stones. Considering that there were few or no roads, the simplest arrangement was to thrust a beam or young tree through the hole of the mill-stone, and then for the whole multitude to wheel it along upong its edge—an operation of some difficulty and danger in a rough district."

The doings in connection with the mills in this town, in times not far distant, fairly well illustrate the above passage. The burgh lands, as well as the kirk lands, were thirled to the mills, and the Town Council were careful that the possessors of these lands should not evade the thirlage. On the 11th August, 1652, the Council appointed a committee to see "The hail growin' cornes of the Towne and Kirkland this present croppe, And make Inventorie thairoff and give in to the Toun Counsell both of ye quantity of the lands and of the possessoris thairof." The inhabitants of the town also were required to have their malt ground at the common mills, and not only so, but they must not purchase ground malt which had been ground at any other mill. The following are examples of the Council's dealings in this matter:—"24th January, 1645. The Provost, Bailys, and Council, Considering that Edward Newall has taken malt bye the Toun's Milns be his own confessione, Ordains him to pay five merks and double multure to the Taxmen." 3d December, 1646—"It is ordained that whosoever resets or receaves grund malt whilk are not grund at the Towns Milns Sall pey the double multure to the Tacksmen farmers and Tacksmen, And pey Ten punds unlaw Conforme to the former acts thereanent." 11th April, 1687—"The Councell Discharges the hail Inhabitants of the Burgh of bringing in or brewing of grund-malt from the country, to the prejudice of the Touns Milns under the pain of being ffined in the value of the malt and loseing their Priveledge of Burges-ship." The Council at another time, agree with the Tacksman of the Mills, to allow "Ilk discoverer of resetting or bringers in of ground malt ane

dollar for ilk loade that shall be discovered, off the fore-end of the fine." Under the most favourable circumstances, restrictions such as these would be likely to lead to inconvenience, but in this instance the rigorous enforcement of them was severely felt, owing to the inadequacy of the Mills to overtake the work required of them. Spates and droughts are often recurring causes of difficulty, but oftener still the condition of the Mills themselves, the pleasant and refreshing sound of falling water as it slides from the revolving water wheel, being often mingled with discordant groaning and jolting noise of ill-fitting and broken machinery. On the 21st January, 1656, "Robert Stewart Tacksman of Mylnes, protestit that he wald give over the Tack at this instant term of Candlemas in respect they were not keipit. The Council protested that they were leading stanes to the Mill Dam and Caal, and were willing to do all diligence for keeping the said Milns in good order." The incapacity of the Town's Mills appear at this time to have reached an acute stage, and the Council found it necessary to supplement them, and for this purpose they secured from Maxwell of Broomholm a lease of Stakeford Mill, situated on the Troqueer side of the river. The acquisition of this Mill was immediately followed by an Act of Council, ordaining that all malt brought into the burgh must be ground at the "Touns twa Common Milns and Staikford Miln." All the three mills, however, are occasionally in want of water, or otherwise unable to work, causing the inhabitants much inconvenience, who are nevertheless still "ordaint to bring their malt to be grindit at the Common Milns," under the penalty of a fine, in addition to their ordinary multure, "except the said inhabitants first bring their said malt to remain at the Touns Milns, and let it remain there for the space of 48 hours, after which space they are to be frie to carrie their malt to other milns."

In order to meet the difficulty so often experienced, the want of water in connection with their water mills, and to put themselves into a position in which they can maintain in full all their privileges, the Council now proceed to erect a horse mill on the Upper Sandbed of Dumfries, some distance northward of the Over Sandbed Water Mill, and in 1687 Thomas Irving and George Carlyle secured a lease, to endure three years, of the Town's Mills, including the horse-mill. The new tenants, shortly before the term at which they are to take possession of the subjects,

seem to think they may as well endeavour to better their bargain. They petition the Council, and complain of the unsatisfactory condition the mills are in, the disadvantages of a horse mill, and that the multures have not been fixed—pointing out the necessity of doing something "for the removal of clamour," and they ask the Council to give them the Dock grass instead of the Kingholm. As the petition helps out the picture of the Mills, the text is given here as it appears in the Minute Book :—

"1st Novr., 1687.—The said day the Councill having considered the Petition given be Thomas Irving and George Carlyle, Tacksmen of the Milns of Dumfreis, making mention, That, whereas your petitioners being Tacksmen of the Milns of the Burgh of Dumfris for three years after Martinmass, at which time we are to enter, and it being at present notourly known that the Horse-miln wants ane wheel and other Timber work necessary to her, and also sufficient Stable, with a Loft, at the end of the said Miln, for keeping the miln horses and fodder, and that the water wall and dams of the Milnhole-miln are altogether Insufficient, and will goe away with the very first glush of water, if it be not speedily help'd, and seeing as yet there are no true measures condescended upon what multure each Boll of the malt pays, May it therefore please your Wisdoms either to take some speedy course for the reparation of the said Milns, and building of the said Stable and Loft, and put them in an sufficient case as Tacksmen can enter to them, Together with measures for lifting and receiving the multure of ilk Boll of malt for the removing of clamour for the time to come, always considering the vast difference and expenses betwixt grinding with horses and water, and servants for attending, and allow the Dock grass in lieu of the Kingholm, in respect of the vast difference, or else to frie us of our Tack, which we are willing to deliver up." Their "Wisdoms" remitted this pawky petition to a committee, who reported in favour of a course with which we are familiar in our own day—"They thought it proper, in consideration of the great expenses the Toun hes been at in building the horse-milne, and the continual expenses the Tacksmen will be at in mentaining the horses, That the Tacksmen be allowed to take half a peck of ilk ten pecks of matt, and if the load consists of more pecks, that they cause measure the same, and that in lieu of both the multure and miller's dues, and leaves the rest of the articles to the Toun's consideration."

Thus in consideration of the great expenses of the town and the great expenses of the tacksmen, some additional payment is required from the sucken inhabitants, bringing up the multures and miller's dues to 5 per cent. of the malt taken to the mills.

These old common mills of the burgh—small buildings, which with their straw-clad roofs and attendant water-wheels, turning with self-satisfied sleepy motion—must have been picturesque objects, joining rural and civic life, the scenes of multifarious and varied strifes, probably also of much pleasant gossip. They are one of the most frequent subjects of minute appearing in the town's minute books. The several succeeding Town Councils, who so unweariedly and zealously guarded the privileges attached to the mills, were composed of men, many of them of rank, education, and wealth, who to their civic interests often joined extensive landed estates in the country. Homer Maxwell of Speddoch, at one time Provost of Dumfries, curiously enough owned and occupied a house in the burgh which adjoined the Over Sandbed Mill. It was the custom to let the town mills by roup, over a long period for one year only, and ultimately for three years; and new tacksmen appear in possession nearly every new let. The tacksmen must have been farmers of the revenues rather than practical millers. Probably they might know as little about the Mills as the commendators did about Church matters spiritual, unconnected with the real revenues of the lands and worldly profits of the See. The miller, however, seems to have had a busy time of it. After a flood, the "water-gangs" required to be cleared of the sand with which they had been filled during the spate; in droughts, the dam-dykes needed to be stopped with fog; and at all times his eye must be abroad on the sucken to see that he is not defrauded of any of his dues. But the miller's greatest troubles lie within the mill. Malt is often brought there and left an indefinite time, and, in the words of the Council's minute, "albeit it should be lost," the miller is blamed. If it be not lost, he is still charged with having diminished its quantity, or of having substituted malt of inferior quality for that of better quality, which had been brought to his mill; and, indeed, to cheat the miller by all fair means and the most ingenious artifices seems to have been the constant aim of all, from the time of Adam, the first miller of Dumfries, downwards. The working millers, if we are to judge by one example, were not free of the propensity commonly attributed to the trade.

Thomas Dewar, miller, was taken red-handed stealing malt from the mill. It does not appear that he was in employment there at the time he committed the theft, and possibly his conduct in present circumstances contrasted with his behaviour when employed in the mills like that of Chaucer's miller—

> " For ther before he stal but curteysly,
> But now he is a thief outrageously."

His punishment was severe and characteristic of the treatment of such cases at the period :—" 12th June, 1663—The Counsell Ordains that Thomas Dewar be convoyit oute of ye Towne be the hand of the Hangman, and nevir to return therin, and a bank [drum] to be bait at his heele that non resett him heirefter in their house, under ye paine of ten merkis *toties quoties*, and Skurging of him out of the toun, Being taken red hand steiling malt out of the sek standing in ye Mylne."

6th February, 1885.

Dr Gilchrist, President, in the Chair. Thirty-two members present.

Deceased Members.—After the reading of the minutes of last meeting, which were adopted, the Chairman moved "That this Society record in its minutes the loss which it has sustained by the death of Dr Frank W. Grierson, and that the Secretary be instructed to convey the sympathy of all present to his bereaved parents." In doing so the President said—"Most of you must be aware of the loss we have sustained in the early death, in a far distant land, of an earnest and valued member of the Society, Dr F. W. Grierson. His time, talents, acquirements, and collections were ever at its service when an opportunity presented itself. The simplicity of his tastes, the amiability of his disposition, the versatility of his talents, the unselfishness of his character, the purity and goodness of his whole nature, were a combination of graces and virtues rarely to be found in the same individual. Though his college curriculum was passed in quietude and without ostentation, he graduated with honours. To his usual medical studies he added a knowledge of several collateral subjects, by which his mind was broadened and matured. With character, talents, and acquisitions such as we

have noted, he could not have failed to be an honour to himself, an ornament to his profession, and an advantage to society. While his untimely death must cause a pang of regret to every member of the Society who knew him at all, it has produced in those who knew him better, feelings of a deeper and more permanent character. Though dead he yet speaketh. To us he saith, 'Time is short, life is uncertain. Be up and doing; work while it is day; the night cometh.'"

On the motion of Mr M'Dowall, vice-president, it was also agreed to record the loss sustained by the death of the Rev. J. B. Johnstone, who had rendered valuable assistance in the archæological department.

Donations.—The Secretary laid on the table pieces of ancient Egyptian papyrus and parchment, with hieroglyphics and Coptic writing thereon, as a donation from Dr Grant Bey; eleven pamphlets on different subjects from Mr G. F. Black; a collection of plants from Mr Arthur Bennett, F.L.S., for distribution among the members.

The Secretary also laid on the table Vols. I. and II. of "Bain's Calendar of Documents," which he had been instructed to purchase for the Library.

Exhibits.—The Chairman exhibited specimens of variegated sandstone found in the Nith, and an old engraving of the Reformers; also an old MS. book, dated 1815, and an old artistic pen-case on behalf of Miss M'Cracken. Mr W. G. Gibson exhibited a Caffre's skull, and pointed out some distinguishing characteristics; also an old oak chair that belonged to the box-master of the shoemakers in connection with the Seven Trades of Dumfries. Dr D. Lennox exhibited and described a number of curiosities brought from the Soudan, including a Remington rifle, an Arab spear, knife, camel sticks, armlets, and several photographs of the natives, and of the Mahdi.

The Chairman intimated that the Committee had held several meetings recently to consider the advisability of recommending the Society to occupy the Presbytery House, as a suitable place for holding their meetings, and for storing their books and specimens. The Secretary read the conditions on which the Presbytery of Dumfries would agree to the proposal. After a short discussion this was adjourned until next meeting.

Communications.

I. *The Broads and Fens of East Anglia.*

By Mr A. Bennett, F.L.S., Corresponding Member.

This paper was illustrated by numerous charts and specimens of almost all the plants mentioned therein, and was read by Mr M'Andrew, Vice-President. In it Mr Bennett describes supposed excursions through this unique portion of English scenery. First, through the "Broads" of Norfolk—those extensive but shallow lagoons of water caused by the small dip of the rivers in that county; secondly, through the Fen district, in the neighbourhood of Ely. Starting from Yarmouth, and taking the train to Potter Heigham, the Broads are entered and botanized by boat. In these Broads such plants are to be found as *Lathyrus palustris*, *Rumex palustris*, *Lastrea cristatum*, *Lastrea Thelypteris*, *Chara Stelligera* (its second British station), *Chara tomentosa* (its first English station), abundance of Charas and Potamogetons, and other marsh and water plants; *Naias marina* (its only British station, discovered in 1883), *Liparis Loeselii*, *Carex paradoxa*, *Cladium Mariscus*, *Sium latifolium*, *Senecio palustris*, *Peucedanum palustre*, and abundance of reeds, *Typha*, *Scirpus*, &c. Leaving the Broads, Mr Bennett began the second part of his supposed tour, on this occasion through the Fen district from Ely. Here the drainage has been more complete than in the Broad country. The following plants are to be gathered in Wicken Fen, and in the Fen district generally:—*Teucrium Scordium*, *Calamagrostis lanceolata*, *Nitella tenuissima*, *Epipactis palustris*, *Viola stagnina*, *Potamogeton lanceolatus* (in the ditch by Burwell Drove—its second British station), *Selinum carvifolium* (near Chippenham on the moor, 1882). The Lincolnshire Fens, being now wholly drained, are not included in the tour.

Appended to Mr Bennett's paper was a note on *Carex Salina*, Wahl. var. *Kattegatensis* Fries, lately found on Wick Water in Caithness-shire.

II. *The Influence of Trees on Climate and Rainfall.* By Mr P. Gray, Corresponding Member. (Abstract).

The author began by stating that forests, smaller aggregations of growing timber, even single trees, induced the deposition of moisture from the atmosphere, checked undue evaporation, and

equalised the flow of rivers and lesser streams. The destruction of forests in hot countries turned fertile lands into deserts; in more temperate regions was the occasion of desolating floods. It had been declared by a recent writer that indiscriminate forest clearing was the sin that had cost the human race its earthly paradise, and that war, pestilence, storms, fanaticism, and intemperance, together with all other mistakes and misfortunes, had not caused half as much permanent damage as this fatal crime against mother earth. The evil was of long standing, and its consequences might be traced throughout all history. Nevertheless it was still proceeding, and, until recently, without check. The North American Continent, on its first discovery almost one continuous woodland from sea to sea, had been nearly, and often wantonly, denuded of trees, so that timber was becoming alarmingly scarce in the United States. The Central Asian table-land, that *officina gentium*, the original home of our Aryan race, was now almost a desert, mainly from this cause. As a proof of this, the state of the Khanate of Bokhara was adduced, a region which, by the foolish destruction of its woods, had been in quite recent times shorn of fertility. It had been well wooded and watered, and was regarded by the Central Asiatics as a sort of terrestrial paradise. But the mania of forest clearing and the fury of civil war had wasted the country of its woods, and now immense tracts, once well-peopled and cultivated, were disappearing under the stealthy and unceasing advance of the sands of the surrounding deserts. The Russian possessions in the Caucasus were menaced by a similar fate from the same cause. Our recent acquisition, Cyprus, was once fertile to a proverb, but the wasteful cutting down of its forests had been followed by drought and sterility. If the higher lands of that island were, however, reclothed with timber, there was no doubt that its plains would again become well-watered and fertile. It was thus that Egypt was losing its proverbial character of a rainless country.

Even single trees induced precipitation. The inhabitants of one of the most arid of the Canaries were at one time supplied with water by a solitary tree, growing at the head of a deep valley, which daily strained a large quantity of water from the humid mist conveyed inland by the sea breeze. But this tree of life was now gone, and the mists, though they still remained, passed away without yielding their accustomed supply. This phenomenon might sometimes be observed in our own country on

misty summer nights. Trees also, it was obvious, checked evaporation from the soil, which had been ascertained to be about fourteen times less in woods than when the ground was bare. With regard to springs, it was matter of frequent experience that the destruction of wood dried these up in many cases. The general effect of woodland was to make the climate of the district more humid; the planting, early in the century, of the hills on the west side of the vale of Dumfries had made sheep-feeding unprofitable in that quarter, although trees in the course of their growth dried wet land.

The evil wrought by forest destruction in temperate climates was manifested in devastating floods. When the ground was bare of trees, the rain collected in torrents and rushed off towards the sea, swelling the rivers to a great height suddenly. The south of France was exceedingly liable to destructive outbreaks of the streams that rise on the northern flanks of the Pyrenees, the lofty summits of which intercepted and condensed the warm vapours brought by south-western gales from the Atlantic.

Various steps had been taken, especially of late years, to arrest the destruction of forests in France, Italy, Germany, and the United States. Only in this country had nothing been done to that end. In one direction, however, there had been gratifying progress—the planting of trees along the streets of the Metropolis and other large towns; and there seemed no reason why the good example should not be followed in smaller towns.

The subject of the economical value of plantations was well worthy of investigation. When, in the early years of this century, the planting of forest trees was strongly advocated by the Highland Society, Dr Hamilton, at its instigation, wrote a treatise of forestry for the use of landholders and tenants, in which he maintained that if two million acres of the waste land of Scotland were planted with larch and other forest trees, their value in a century would equal the amount of the National Debt, besides improving the remainder of the land to the extent of ten millions sterling per annum. Trees, the author observed in conclusion, unlike all other crops, increased nearly all the year round, and depended less than any on the character of the season; and there were many additional reasons for the practice of arboriculture, all tending to enforce the exhortation of the moribund laird of Dumbiedykes—"Aye be stickin' in a tree, Jock; it'll be growin' when ye're sleepin'."

6th March, 1885.

Dr Gilchrist, President, in the Chair. Forty members present.

Donations.—The Chairman presented, on behalf of Dr Grant, Bey of Cairo, a number of fragments of Egyptian pottery, pieces of alabaster, nummulitic limestone, fossil-wood, sandstone, Roman cement, ancient glass, and flint instruments. Mr W. G. Scott presented a fine specimen of the Great Northern Diver (Colymbus Glacialis), which had been shot in the preceding winter at Carsethorn. The Secretary laid on the table the Second Annual Report of the Bureau of Ethnology, 1880-81, and the Smithsonian Institution Report for 1882, as donations from the Smithsonian Institution; also nine parts of the Linnean Society's Transactions, as a donation from Mr Robinson-Douglas.

Exhibits.—Mr Scott exhibited specimens of stigmaria, the coralline limestone, cannel coal, bitumen, and galena from the Leadhills; also a small stone ring found at Troquhain, New-Galloway. Miss Reid exhibited several specimens of the rocks taken from the excavations in the sinking of the Mersey Tunnel.

Communications.

I. *Early Notices of the use of Tobacco in Britain.*

By Rector Chinnock.

II. *The Rocks of the Moffat District and their Fossil Remains.*

By Mr James Dairon, F.G.S.

I have thought it advisable to make this communication as useful as possible, so that it may be available as a kind of guide to the different localities around Moffat, leading to the best known situations in these parts, and as near as possible to where the working student may find the different genera and species of the Graptolitic family in the greatest profusion, and also in the best state of preservation. The finely rounded character of the hills of Upper Annandale, many of them exceeding 2000 feet in height, and covered with verdure to their summit, may not possess the rugged grandeur of the northern or western Highlands, still they have a beauty of their own, and in many parts make up some of the finest pastoral scenery in Scotland. Underneath their grassy covering we find the prevailing rock to be a Silurian grit or Grauwacke, of a grey or greenish colour, and

varying in some parts to a purplish tint. It is very hard and durable, and makes an excellent building material, being much used in the locality. There are associated with the Grauwackes a thin flaggy grit, and black Graptolitic shales, so often found in the scores and burns, which are formed in the hill sides by denudation. Fragments of these black shales may be found among the gravel in the bed of the Annan, six or seven miles distant from the parent rock at Hartfell, and I have frequently picked up some very good specimens brought down in this way. There is also a red sandstone rock, said to be of the Permian Age, which is found largely at the base of the hills, and in some parts has been denuded and carried a considerable distance into the valleys, where it is in many places mixed with small pieces of the Silurian grit, giving an idea that the hills had been covered with this red sandstone at an early epoch, before it was washed down to the base of the hills and there preserved. One of the best exposures of it is to be found in sections along the burn from Hartfell, a short distance off the main road going up to the well, and in other parts such as at Beldcraig, Wellburn, and Frenchland burn. I have no doubt it is the equivalent of the Corncockle moor stone, but by no means equal to it, as it does not seem to be fit for any economic purpose whatever.

There are few trap dykes or outbursts of igneous rocks observable in the locality, except at Coatshill Quarry, which is wrought for road metal, &c. There is also another exposure of the same dyke now in the railway cutting between Moffat and Beattock, which was visited by this Society last summer (August 4th, 1884). We may safely state that there are none of the other rock formations which appear to have received such a crushing and contorting as these old Silurian rocks; and it is remarkable that there are so few faults to be found in the district of any magnitude.

We find the black Graptolitic shales in bands, tilted up at different angles from their original bed, in many parts inverted, while very frequently they are of a folding character, existing in bands of various heights, from three to five or six feet in thickness, with a parting of a white kind of pipe clay, of from two inches to six inches in thickness, which gets exceedingly hard when in a dry situation. The black Graptolitic shales seem to be composed of a dark mud, slowly and quietly laid down in a deep sea bottom, swarming with Graptolites and Crustacea, with

a few Brachiopoda, rarely with Serpulites, and small Orthoceratites. It often happens that we find occasionally in these upper shales a number of small faults in the cleavage joints, so that when we split up the slab and find a part of a Graptolite or a number of them on the surface of the slab, the other portions of the specimens will be on another plane, either above or below on the cleavage joint, but they may be rather difficult to find in most cases.

It will be seen from the specimens on the table that the lower shales are very much harder than the upper ones, and are generally not so much contorted or folded. Slabs of a much larger size can be obtained, and these split much more freely in any thickness of layer down to 1-16th of an inch than the upper. They are generally quite free from the aluminous matter, so abundant in the upper shales. Curious as it may appear they give off a very pleasant odour when closely confined—as in a Cabinet drawer—for any length of time. Whether this may be due to the great quantity of organic matter they contain or not, I am not quite prepared to say. The finest section of the lower shales to be found near Moffat is at Hartfell, on the north side of the burn, opposite the Spa, or on the left side looking up the Corrie; this section is nearly a quarter of a mile long, and about 40 feet below the upper crag. There is another parallel with it, and then a talus of *debris* at the bottom. From the bed of the burn to the top is fully 300 feet. The principal fossils of these shales are the branching forms, and belong to the following Genera, viz.:—*Pleurograptus*, *Diplograptus*, *Dicranograptus*, *Dicellograptus*, *Climacograptus*, *Glossograptus*, *Thamnograptus*, *Retiolites*, and portions of *Eurypterus*. One bed of these shales does not split up but falls into small tabular pieces under the hammer, caused no doubt by metamorphism, the action of hot vapours, and various other causes.

On leaving Moffat for Dobbs' Linn, a distance of eleven miles, we go along the Selkirk road for about a mile, when we come to the Frenchland Tower on the left; near that ruin runs the Frenchland Burn, which passes under the road. We may go up either side of the burn, and after passing the ruin we come (at 200 or 300 yards' distance) upon an exposure of the black shales with Graptolites. The shale is very hard and tough; it is on the left hand side of the burn going up. There are also other spots here, but they are rather limited in extent.

The next place we come to on the road is Carmichen Scaurs,

about five miles from Moffat, on the right hand side of the valley going up. The Graptolitic shales found there are not rich in fossils; neither are they in good preservation, scarcely repaying the fatiguing climb over the hills. However, I believe there are some good specimens to be got at Selcoth Burn, which runs down from Carmichen Scaurs, and falls into the Moffat Water. In addition to the most of the Birkhill fossils which are got here, some excellent sections are to be seen which would make the gorge well worth a visit. On the left side of the hills, a little past Polmoody farm, there are three deep scaurs, in which all the upper Birkhill fossils are got in a fine state of preservation. I have obtained some in relief from one of these scaurs. *M. lobiferus* is abundant in the middle one; also many other species, all belonging to the upper beds, a few of which are now arranged before you on the table. The next place we come to on the way is the Grey Mare's Tail. The rocks on this picturesque spot are all of Silurian grit. About a mile further on we arrive at Birkhill Cottage, where we stand on an anticlinal axis, or watershed, Selkirkshire being on one side and Dumfriesshire on the other — the Moffat water running the one way and the Yarrow the reverse. These black anthracitic shales stretch right across the country in a slanting direction from an anticlinal axis at Birkhill to the Irish Sea on the one shore, and to St. Abbe's Head on the other. If we now retrace our steps along the road following one of the two burns, the one which runs past the Cottage and joins that issuing from Dobbs' Linn (uniting about the entrance to the above place), thus forming the infant Moffat water, which runs in a straight line down the valley to the south-west, and joins the Annan a short distance from Moffat. The entrance into Dobbs' Linn has rather a rugged, dark, and weird-like aspect, which may be occasioned by the narrowness of the glen, the effect of the dark shales, and the absence of vegetation. While we must consider Dobbs' Linn to stand pre-eminent above all other parts in the Moffat district—and I might add that nowhere else can it be surpassed for the richness, profusion, and fine preservation of its fossil remains—to the physical student it cannot be surpassed for its fine rock sections, as well as its extensive range of the Graptolitic family, in both genera and species. There are other places in the district besides these named. The principal are Hartfell, Garpel Glen, Duffkinnel Water, Raehills, where some

excellent specimens are to be obtained, and also at Glenkiln, where numerous specimens belonging to the lower shales are got. Beld Craig is also an excellent place for both the upper and lower shales, where many fine specimens can be obtained. A stranger going to Beld Craig for the first time had better go to the head of the glen and then up the burn above the fall, for about a mile, during which distance the shales are barren, but after this we come upon the fossiliferous shales in abundance.

In Bromel's description of the fossils of Sweden (1727), which appears to be the earliest account of Graptolites known, the author supposes some of them to have the appearance of the fossil leaves of grasses.

The term Graptolithes (*Gr. Grapho*, I write, *lithos*, stone) is found for the first time in the "Systemæ Naturæ" of Linnæus, first edition. The name was applied to certain natural objects, many of which could not be Graptolites, and which he did not believe to be true fossils. In the twelfth edition of the "Systemæ," Stockholm, 1768, there is a description of a fossil named by Linnæus *Graptolithus scalaris*, the nature of which has caused a good deal of controversy. This *Graptolithus scalaris* was originally described by Linnæus, and figured in his "Scanian Travels" (Scanska Resa), published in 1751. I do not think we need follow this supposed Graptolite further. It would be rather difficult to form a correct opinion of it, whether it was of a Monoprionidian or a Diprionidian form, from the figure before us, which I have brought forward and drawn on an enlarged scale from that given by Geinitz (Die Graptolithen vi. fig. 20). The two other circular forms under *G. scalaris* are probably Graptolites; one of them has some resemblance to *M. Sedgwickii*, the other has got denticles on each side of the solid axis, which I have never seen before on a simple Graptolite. We also find their denticles running downwards from the initial point, and the same from their distal point, and meeting at the centre of the circle; this is a thing quite unusual in any form of Graptolite I have ever seen. There may have been some mistake in copying from the original, but in fact they appear to be more like a copy from a Grecian or Roman marble wreath—all they want is the ribbon on the top to complete the likeness, for in no way do they resemble the natural form of a Graptolite.

Historical Opinions.—In 1821, Wahlenberg considered the Graptolites of Sweden as very slender Orthoceratites. In this

view a few others agree with Wahlenberg. In 1839 Sir Roderick Murchison described and figured in his Silurian System three species of Graptolites. He was of opinion that Graptolites show most affinity with the living Pennatulidæ. We are indebted to Professor Sedgwick for the first account of the rocks of the Moffat district. In his memoir, "On the Geological Structure and Relations of the Frontier Chain of South Scotland," which was read at the British Association at Glasgow in 1850, he classed the rocks of the Southern Highlands into five successive formations. The oldest and lowest of these formations he called the Moffat group, embracing the greater part of the strata of the district. It was explained as "a great thickness of arenaceous rocks, in which pyritous and graptolitiferous schist abounds to such an extent that the arenaceous beds become sometimes subordinate to it." In the same year he also described and figured twelve species of Graptolites from the anthracitic shales (Upper Llandeilo) of Dumfriesshire. But there can be no doubt that the most valuable paper which has as yet been published upon the rocks of the Moffat district is the memoir of Professor Harkness "On the Silurians of Dumfries," presented to the Geological Society of London in 1850. The author clearly adopted the view that the Graptolitic shales run in long lines among the unfossiliferous greywackes, and gave a short description of several localities along the three parallel bands of Hartfell, Frenchland, and Craigmichen. Following these bands for a number of miles through the district, he assumed their probable continuance from the one sea to the other, and seemed to consider that the great disturbances and upheavals which these rocks sustained were caused by three gigantic faults; but I find no proof of such faults running through the district. Sir Roderick Murchison, the same year, in his communication "On the Silurian Rocks of the South of Scotland," made some important statements upon the strata of the district—some sections of which he had hastily examined under the guidance of Prof. Harkness—and expressed his willingness to accept Harkness's theory of the identity of the strata forming the Graptolitic bands, but he preferred to interpret their geographical position on the hypothesis of great folds, the upper arches of which had been denuded. This view is the one now generally accepted. The dark mud-formed shales that are associated with the Greywackes, and in some parts highly anthracitic, are evidently the remains of an ancient

sea bottom, where those serriated and curiously formed Zoophytes, named Graptolites, seemed to have swarmed in extraordinary abundance; and, as far as we at present know, they began life in the Silurian system, lived throughout the whole period, and died out at the close of that formation. Although their geological range is not extensive, being confined to these old Silurian rocks, their geographical range is very expansive, being found in the British Isles, Australia, States of America, Canada, and various parts of the continent of Europe. It seems a difficult matter to determine to what class the Graptolitidæ belong, some authorities believing that they are nearly related to the Virgularia of the present seas, others to the Polyzoa, and others to Sertularia or Hydrozoa, because they have a chitinous or horny exterior, with hydrotheca or cells; but the Sertularia have no solid axis, neither are the cells overlapping each other like those of the Graptolitidæ. Again, the Polyzoa possess a calcareous exterior, and in that case are dissimilar. It was thought at one time that Graptolites attached themselves to the rocks or other objects at the sea bottom, while some observers say they were free-floating. From a number of specimens obtained about two years ago, I am thoroughly convinced that the greatest number were fixed bodies, especially the genus Monograptus. In the genera Diplograptus and Didimograptus, there are numbers of species which have no radical point of attachment, so I think we may conclude that they were both fixed and free-floating. On the other hand, the Polyzoa, with one exception, *Christatella*, a fresh water species, are all attached to some object, and also the whole of the Sertularia. General Portlock appears to have been the first to suggest definitely that the Graptolites were allied to the Sertulariæ and Plumulariæ; however, all modern observers are now agreed in placing the Graptolites somewhere among the Hydrozoa.

I think it may be advisable just now, as there may be some of the members present who are unacquainted with the Graptolitidæ, to explain the structure of these interesting Zoophytes, and with which I will be as brief as possible. Unfortunately, they are rather small objects, but with the aid of these large drawings, and also this model of a Graptolite, I hope to make the description of them much plainer than by describing the specimens you see on the table. When we describe one we describe the whole of the genus Monograptus, the polypery being

all built up on the same principle, although they may be of different size and outline. The model shown is of the Graptolite *(Monograptus priodon)*, enlarged about 30 diameters. It may be either straight or curved, with a solid axis or stipe, upon which the polypery is built. The common canal is well marked, in which was contained the cænosarc, from which each polyp was developed. On the margin of the periderm which surrounds the cænosarc, the hydrothecæ or cells are constructed, each individual polyp going through the cænosarc to the subsistence of the whole colony. The whole of the outside of the polypery is composed of a chitinous or horny substance, generally in the course of mineralisation, the mouth of the cellule being at the point of the denticle, each cell being inhabited by a polyp, and having communication with the common canal. The simple Monograptus is supposed to have four margins or borders surrounding a hollow tube, the inner resting on the common canal, which is not defined, the superior on the top, or point on which is the cell mouth. This description applies to nearly all the other simple forms of graptolites. In collecting the above organisms I think it is a matter of much importance to procure, if possible, those fossils with both their distal and initial points, as they can be identified with greater certainty, besides rendering the forms of the organisms more complete.

III. *A Memoir of the Rev. Mr Gatt, Minister of Graitney, 1727-87.*

By Mr J. Gibson H. Starke, Vice-President.

The subject of this short notice—the Rev. James Gatt—seems to me worthy of having his name recorded in the proceedings of this Society, as an eminent parish minister in Dumfriesshire who, during his lifetime, was probably as widely known as any among his contemporaries; and whose memory still lingers among a few of the present generation. No formal biography of him has ever been published, and it is now impossible to obtain sufficient materials for this purpose, but from two brief notices of him which have been published, and from traditionary accounts, he was not only beloved as a minister, but eminent as a scholar.

The leading events of his life are given in the *Fasti Ecclesiæ Scoticanæ*, by Dr Hew Scott; and an appreciative sketch of his character appeared in "Good Words" for December, 1876, by the Rev. Mr Edgar, formerly minister of Graitney, or, as it is now

spelled, Gretna. His name stands alone among the eminent men of that parish in the Statistical Account of Dumfriesshire, where it is also mentioned that many of his MSS. are in the possession of the "Misses Gibson, Edinburgh." These ladies, now long deceased, were my grand aunts, and then well known in Edinburgh society. It was when a boy, spending part of my holidays in Gretna, that I first heard the name of Mr Gatt mentioned with reverence and regard; but the old people who then loved to speak of him are all dead; and, indeed, since the railway invaded what was then a secluded parish these old-world stories, as I may call them, have gradually given place to new and more exciting narratives.

My present purpose is to supplement the information which has been already published by a few traditions within my own knowledge, chiefly obtained from the late Rev. Mr Smith, minister of Tillicoultry, who in his boyhood heard them from his uncle, the late Rev. Mr Smith, minister of Morton, in Dumfriesshire, both of whom entertained through life feelings of great veneration and regard for Mr Gatt's memory.

Mr Gatt sometimes spelled his name Gath, but I understand this was because in Latin "Gatheus" is more euphonious, and Gatt was his proper surname. In the Statistical Account it is spelt Galt, which has been a printer's error. He was born 10th January, 1700, in Cullen, Banffshire; studied theology in the University of Edinburgh; was examined and licensed in 1727; and appointed assistant and successor to the Rev. Mr Black, then minister of Gretna, towards the close of the same year. He was ordained minister of the parish, 30th April, 1730, and died as father of the Synod, 31st October, 1787, in his 88th year, and after a pastorate in the parish of altogether 60 years.

He married in 1741 Miss Jean Gowanlock, daughter of the then minister of the adjoining parish of Kirkpatrick-Fleming, who died in 1786, being a year before himself, aged 86; and both are buried in the parish churchyard of Gretna.

They had no family, and adopted a niece, Miss Maclaurin, who died in Edinburgh unmarried, a venerable and highly respected lady, in 1818, aged 88.

A portrait in crayons of Mr Gatt represents a shrewd, kindly, and intellectual countenance beneath a very old fashioned white wig, and dressed in canonicals. This portrait has been sent to

me as a gift in a generous manner by the Rev. Dr Edgar of Newburgh, formerly of Gretna. He was stout, and rather little in stature.

He was a great classical scholar, and when a student in theology he obtained an Exchequer Bursary, in acknowledgment of which he yearly composed a Latin poem. He was recommended by the General Assembly in 1822 as a good Gaelic scholar; and I have no doubt that this language was then spoken by many in the south of Scotland, and would be a special qualification for a rural minister in this district. But his chief delight was in Latin versification, into which he translated the Book of Job and the Proverbs of Solomon. Some of his lighter poems in that language, entitled "Miscellanea Metrica," are said to have been fine scholarly productions. In Steven's History of the High School of Edinburgh it is stated that one of the masters —Mr Luke Fraser—read a Latin memoir and criticism on the Latin compositions of the Rev. Mr Gatt for the Literary Society, which existed from 1807 to 1821 in Edinburgh; but although search has been made for the MS. it has not been discovered. Mr Fraser was famous as a Latin scholar, and as the members of this Society were mostly masters of the school and Professors of the University, this circumstance testifies also to the scholarship of Mr Gatt. He kept a diary in Latin, which I have seen, but it is now difficult to decipher. It records that he finished his translation of the Proverbs of Solomon on 4th July, 1734, and had made a copy of it by March of the year following, which copy he took with him in May to Edinburgh, when he likewise attended the meeting of the General Assembly of the Church, and submitted it to Mr Ruddiman, the greatest of Scotch grammarians; who, I find, was like Mr Gatt, a native of Banffshire; and at that time settled in Edinburgh as a printer and publisher of several learned Latin works. On his return to Gretna from Edinburgh he makes this entry in his diary, dated 26th May, 1735—*Gloria sit Deo in excelsis, quod ego incolumis reversus sum a Synodo Nationali.*

He was also a Hebrew scholar, and I show you a small Jewish calendar or almanack, now very worn and fragile, which bears within it the following writing:—"Ja. Gatt, Graitney, gifted by Jacob and Simon Levi, who brought the same from London."

It is not only, however, as a great scholar that Mr Gatt's memory has been so long preserved; but for his unaffected piety,

bright example as a parish minister, and his humorous disposition. He was a watchful shepherd over the flock committed to his care, and it is mentioned in the Statistical Account that the "Parochial registers and transactions of the Kirk-Session, among which last are interspersed many remarkable occurrences, are extremely accurately written by Mr Gatt, and pretty voluminous. They commence in 1730 and continue for 60 years, after which there is an almost entire deficiency in the minutes of the Session." Several extracts are given by Mr Edgar in his paper already mentioned, which therefore I do not here repeat, as I wish this notice to be confined as much as possible to circumstances which have not yet been made public.

The following illustrates the earnest piety of the pastor. It is an entry in his diary of a morning reflection when rising at 5 o'clock, and is dated 20th March, 1736 :—

> "Arise ! oh James, and save from flames
> Thy people who are sinning ;
> Angel ! declare me who they are,
> It's time I was beginning."

In 1745 Prince Charles Edward and his followers passed through Gretna on their enterprise to seize London, and subjugate the kingdom again to the Stuart dynasty. They rested for refreshment at the Manse, but Mr Gatt having no sympathy with this rebellion against the reigning Hanoverian Sovereign, "retired," he tells us, "in a vessel to Bowness," across the Solway, leaving his wife to do the honours. There is a tradition that all the valuables of the parish were concealed in a garret of the Manse to escape the cupidity of the rebels, and that Mrs Gatt entertained the Prince and his officers so well that no theft was committed. In proof of this tradition, I am able to show you some solid silver spoons which, I believe, were used upon that occasion. They are handsome, and in good preservation, having been well taken care of in my family for now more than a hundred years. They bear the initials of Mr Gatt, and of his wife, and also of his niece, to whom they were first bequeathed, and who was a relative of the Gibson family. I consider them the most interesting among my antiquarian possessions. Mr Gatt was of very simple habits and primitive character, with a power of humour and repartee which has been handed down from generation to generation within the parish of Gretna. When he first arrived there from Edinburgh an inquisitive person was

anxious to learn where he originally came from? "Oh," said Mr Gatt, "I left the Highlands one misty morning, and I never could find the way back again!"

On applying for an augmentation of stipend, his plea was that he had to exercise a great deal of hospitality to persons from England; for when the small stream called the Sark, between the two countries, was swollen with rain, the travellers got dipped in that Sark and he got dipped in debt.

On one occasion that he was dining with Sir William Maxwell at Springkell, a blustering fellow at the table thought to make a butt of such a simple-looking man as Mr Gatt, and went on with offensive remarks, which he no doubt thought should be accepted as mere banter, until at last Mr Gatt, looking at him, said—"Sir, I have been in my day struck with the hoof of a horse, and borne it patiently; but who can tolerate patiently a kick from the heel of an ass?" The company received the reprimand with silent approbation, and the snob was crestfallen for the rest of the evening.

By his own request Mr Gatt was buried in a north and south position to show his belief that it matters little how the body is placed provided that the soul lies right in the sight of God. An old tombstone bears the following inscription to his memory in the churchyard of Gretna:—

"Here lyes the Revd. Mr James Gatt, late Minister of the Gospel here, who died October 31st, 1787, in the 88th year of his age. He was 60 years Minister of this parish, during which long period he discharged the office of a pastor with the most unwearied diligence and fidelity, exemplifying in his walk and conversation the power of that religion which he inculcated. By the simplicity of his manners, and the affability of his conduct, he was highly esteemed by his flock, and deservedly held in the greatest veneration by all who had the pleasure of his acquaintance.

"*In memoriam perpetuam est justus. Utinam post hujus vitae exitum, felicitatem consequar Coelo Repositam.*

(The just man is held in perpetual remembrance. Oh that, after this life has ended, I may obtain the happiness laid up in heaven.)

IV. *Modern Egypt.* By J. A. S. Grant, Bey, M.D., LL.D.

This communication was read by the Secretary, and gave a brief sketch of the physical features of Egypt, the various races which inhabit that country, a description of the larger cities, and some interesting details respecting its government.

3rd April, 1885.

Dr Gilchrist, President, in the Chair. Thirty-eight members present.

New Member.—Dr Collie, Castle Street, Dumfries.

Donations.—Mr Coles presented eighteen specimens of the genus *Hypnum*. The Secretary laid on the table the Transactions of the Huddersfield Natural History Society, Vol. I. of the Journal of the New York Microscopic Society, gifts from the respective societies; also several pamphlets on lake dwellings as a donation from Mr G. F. Black.

Exhibits.—Mr Rutherford exhibited specimens of the Red Admiral, *Vanessa Atalanta*, and the Painted Lady, *Cynthia Cardui*, and remarked that these butterflies were very rare in this district in the preceding summer. He also exhibited the larva of the Puss Moth, *Cerura venula*.

The Society's New Rooms.—The Secretary intimated that since the February meeting the committee held three meetings in connection with the Presbytery House scheme, and he submitted the following minute, which the committee had unanimously adopted, viz. :—"That the scheme to arrange for the use of the old Presbytery House be approved of on the condition that sufficient subscriptions be received to cover the expense of necessary repairs and alterations." After a short discussion, on the motion of the Secretary, seconded by Mr W. M'Dowall, vice-president, it was agreed "That this meeting approves of the action of the committee; they were to further consider the scheme, and report at a future meeting called for the purpose, before deciding thereon."

Field Meetings.—It was agreed that the summer Field Meetings be held as follows:—May, to Spottes Glen; June, to Parton; July, Thornhill District; August, Bridge of Dee and Brig House Bay; September, Burnswark Camp.

Communications.

I. *A Leaflet from the Book of Nature.* By Mr F. R. Coles.

Nature has but one volume and one language, and reveals herself to us through but one great channel of communication. From the sparkling of the remotest star to the gleam of ephemeral life in the lowest polyp there is for humanity but one

study. What are our arctic and tropic, seasons and tides, temperatures and mechanisms but the expression of man's attempts at catching hold of the universal law, of his assimilating as much or as little of it as he can to the wants of his own nature?

And this one grand medium for the accomplishment of a productive study of nature, this one faculty without which a Newton or a Humboldt were impossible, with which the humblest of us can add a cubit to the stature of scientific truth, is *Observation.*

We can never emphasis this fact too deeply. The ingenious scientist of the middle ages sat in his cell and dreamed out a theory of the universe; and a pretty brainful of cobwebs he bequeathed to the keener vision of our age. The modern scientist, albeit his ingenuity lacks something of the charm of his predecessor's, begins and holds to the right method throughout his enquiries, and into what hidden regions his microscope and scalpel plunge, not many of us as yet perhaps fully acknowledge.

It is not, however, on mediæval theories or modern speculations that I want to speak to-night; not to weigh planets or compute the age of the Glacial epoch; but, with the view of helping fellow-students, novices especially, towards cultivating this faculty of *observation,* I am going to describe a little of the life that goes on, all unheeded by most of us, close to the ground and amongst the foliage of common plants on any common bit of mother earth. We transport ourselves during the glowing hours of a fair summer's day out of sound and sight of brick and mortar, and choose a strip of hedgerow well feathered with the despised "weeds" which the roadman shovels aside into unsightly heaps. So long as it is not excessively dry, it is pretty much a matter of indifference what spot we choose. Here, for instance, is a grand clump of the common cow parsnip *(Heracleum Sphondylium),* with its stout bristly stem and handsome leaves. In one of the deep-cloven sinuations of this leaf you will very likely find a tiny land-snail *(Zonites nitidulus),* whose glossy house shines with a lustre Aladdin might envy. If you lift the shell, the warmth of your finger will doubtless tempt the little creature to crawl out, when, with your pocket lens, you note its dark, clear grey tentacles and brown-tinged body; touch it ever so gently, and in go "horns" and body back into the glossy shell—timid, sensitive little mollusk! Perhaps at the root of our tall umbelliferous plant a good specimen of a very common but well-marked land-

snail may be taking a mid-day nap *(Helix arbustorum)*. Its richly mottled, brown shell, the clear porcelain-white of its outer lip, and deep blue-black of the animal itself make it an object of interest and some beauty.

See! what a busy region we disturb when we lift this stone! Half-a-dozen scarlet-bodied spiderets, "soldiers," scampering away in most unmilitary haste to hide under crumbs of brown earth; here a grey-brownish slug, there a jet black one, larger and fatter, put out first one and then another tentacle, resenting the intrusion on their slumber, while you wonder how such big, soft animals can lie, to say nothing of sleeping, under a mass of stone like this. Beetles, black and dusky brown, flashed with prismatic green, scuttle off at a break-neck pace out and over the rough hollows and hillocks made by the stone, and begin a vigorous exploration of the closely woven covert of grasses and *Adoxa*-leaves, which to them is a forest of mystery and safety. Those leaves of the *Adoxa*, and, still more, its root will repay your study. Those white roundish cocoon-like things are spiders' nests; these pellucid globules, for all the world like single grains of boiled tapioca, are the egg-nuclei of snails. Pocket them carefully, you may find they are phosphorescent, and it is yet a moot point what species have and have not phosphorescent eggs. Under the driest part of the root-entangled edges of our hollow is a whole colony of *H. rotundata*—one of our very commonest land shells, but also one of the most beautifully sculptured. Close behind these, half hid by a drooping frondlet of a lovely, and also common, moss *(Th^m. tamariscinum)*, is the brilliant banded shell of *H. hortensis*, the shell whose countless variations and likeness to *Helix nemoralis* cause so much discussion amongst persons who prefer to disintegrate genera rather than unite species. One broad distinction between the two shells, whether species or not, is easy to bear in mind—the wood snail, *H. nemoralis*, has the outer lip dark chocolate-brown, almost black, while in *H. hortensis* the lip is usually white. Searching more narrowly into the crevices of this earthy hollow, you will perhaps discover that those minute gleamings of silvery opalescence, mixed up with the crumbling earth, are, when you isolate them, two other species of *Zonites: crystallinus* and *purus;* the former one of the very loveliest of our land-shells, its tiny tenant's body being nearly as translucent as its house, which is aptly likened to crystal. Another pretty and generally-distributed little mollusk is likely

to be here, *Vitrina pellucida*, the glass shell. Something moving on the damp side of the stone catches your eye. What are these things? like, but far smaller than, grains of rice; and they are moving along one after another in a hair's-breadth fissure in the stone. Pick them up with great care, using your tweezers, and on examination, under a good lens, which had better be done at home, you will find reason to marvel how Nature moulds, by means of so soft a substance as the "mantle" of a snail, a tiny monument, exquisitely sculptured, and solid and durable as marble itself. And this on such a minute scale. It would take fully two hundred of these shells, *Carychium minimum*, to cover the surface of one square inch—yet see how wonderfully their delicate convolutions are chased and carved into spiral twistings and grooves and furrows innumerable. There comes another small traveller with his house on his back, not so ornamental a dwelling as the last carried, but still well worth study. This shell is of a peculiarly rich oily gloss *(Zua lubrica)* and a rich tawny brown, unlike any other land shell of ours in these two respects. How well it contrasts with the grey tones of the stone and the pure white of *Carychium*.

We noticed, in passing, just now the graceful frondlets of a moss, but there are sure to be a dozen species of this lowly, but very lovely, sub-kingdom and its allies, beautifying the borders of the little hollow we are so interested in, and not beautifying earth alone.

There is a reason for the existence of all life, animal and vegetable, quite apart from our direct needs and caprices. And, without a great deal of brain-racking, we can discern, surely, that one reason for the existence of mosses is to keep the moisture of rain about the roots of herbs and trees, and so, to help, in the long run, to equalise temperature and climate. Mosses are, in fact, a striking example of the power of littles. Look at the long ruddy stems which carry the fruit of this same moss. There is good work for the microscope for many a long winter evening in the examination of the leaves and fruits of the one genus *Hypnum*, of which this moss is at once a very common and a very lovely type.

This bit of hunting ground of ours is sure, almost, to have *H. triquetrum*, *loreum*, and perhaps *serpens* and *molluscum*, besides others more or less conspicuous; amongst the roots of which you will very likely find one or two species of the shell *Vertigo*, and that

minutest and perhaps loveliest of the Helices, *H. pygmæa*. Below this little two-inch high crest of damp soil well moistened by the stored up rain-drops, fallen days ago on the larger mosses, are clumps of other genera, *e. g. Pogonatum aloides* and *nanum*, *Physc. pyriforme*, possibly a little of the minute *Ph. subulatum*, while the common Fork Moss, *D. scoparium*, thickly tufts the shady nooks above. Here is a moss with tiny apples each on a stalk—a very pretty little plant is it, *B. pomiformis*. Possibly you may notice a tall, beautiful-leaved moss with four or five or even more golden-ruddy fruit-stalks upspringing together out of its crown of green foliage. This is a prize. It is one of the genus *Bryum*, *M. undulatum*, and an unforgetable trophy.

On the very stone we turned over we may find—especially if it be rather newly fallen from the dyke behind our Cow Parsnip —six or seven species of mosses all very frequent—the dainty *Bryum argenteum*, *Grimmia pulvinata*, commonest, softest tufted little moss there is; *G. Doniana*; *Hom. sericeum*, whose silk-lustrous leaves and prolific fruitage mark it out well; *H. populeum*; one or two *Tortulæ* or awl-mosses; and others easy to name when once known, but difficult to describe.

Then, deep in among the stems of such larger mosses as we have noticed, and the roots of neighbouring flowering plants, the ground is intricately covered with the inwoven greenery of such beautiful and elfish-looking plants as the Commoner Hepatics, *e.g.*, *Loph. bidentata*, *Plag. asplenoides*, and *Pl. spinulosa*. So lavish is nature of means and ways of nourishing different grades and successions of being, and of supplying waste and loss, for ever filling up and restoring, and making paradises out of deserts. And what fairy-like pure paradises they are—these fresh, pellucid-green, labyrinthine groves of moss and glades of Hepatic! The dwellers therein are, no doubt, happy in their way; very little reck they of taxes and war-levies! One imagines them as free and beautiful in their very lives as the little crystalline houses they carry about so glibly. And yet, did we study them at home, narrowly, there is as little doubt that we should find even so magnificently housed as creature as *Helix pygmæa*, or our pet mollusk *Carychium min.*, has a dread of some monster of a wood-louse, or a worm, or of some conscienceless terrific fellow-snail! Then even the larger mollusks themselves are a prey to sundry little parasites, which, though they may not injure their host fatally, no doubt inspire him with an occasional wish to "shuffle

off this mortal coil." And so we find that, after all, man is not the only tormented animal, that even so low in the scale of life as the soft-bodied invertebrates he has sympathies somewhat in common—that the very crawling snail which he, in cruel thoughtlessness, crushes with his boot-heel, had its birth and upbringing, its loves and quarrels, its midnight revels among the gloomy recesses of the hedge, its uses and functions as one link in the never-ending chain that girdles this mystery of life.

I have thus far tried to show what may be seen under almost any common bit of hedgerow, and have purposely omitted much that is often visible, but which I cannot describe, namely, the numbers of small insects that vanish like specks of dust on the upturning of a stone, and leave a sense of bewilderment at their numbers, their variety, their rapidity of movement—their sudden non-existence, so to speak. Many plants also within touch of such a commonplace bit of ground would be observed, and long time occupied in noting and describing their striking points and peculiarities. No need to complain of want of material, at any rate. What I want to impress on anyone here likely to need a stimulus for his observation, is that the right seeing of any natural fact is in itself a most valuable possession, while the import of a rightly-recorded series of facts so grasped may—who knows?—have definite influence upon general science in after years.

Begin courageously. The first step is the most difficult everywhere; and in the study of Nature, by hedgerow and hillock, one of the most difficult first steps is to rid oneself of the fear of the taunt conveyed in the words "peculiar," "eccentric," "queer," and the like. You dread coming home, after a long healthy "holy-day" among the glens and woods, with bulging out pockets, vasculum crammed to bursting, and a look that means *supper*, lest a laugh be raised at your appearance. Learn to contemn such laughter. Common-place persons will have it that So-and-so has a weakness, poor fellow, for beetles, or "oor Tam 's just crazy ower thae mosses," and so on. Well, if you feel any sympathetic power within you attracting towards Beetles or Mosses, roll the war back into the enemy's camp, and tell them theirs is the weakness who follow every foolish fashion with every changing moon, and theirs the craziness who prefer the gorgeousness of a "Solomon in all his glory" to the apparel in which the Creator clothes the grasses of the field.

For the majority of persons, especially those who are encompassed continually by the strain and struggle of modern city life, nothing is better than to give free rein to a Natural History hobby. Nothing so completely forces one into patience, so utterly contrasts the clamorous bustle of man's work-a-day notions with the deep silent sustained movement of all Nature's processes, as to get gradually and everlastingly in love with some one group of creatures, whom you cannot hurry, who will not be the slaves of your human precision, but into whose beautiful and orderly existence the more deeply you gaze the more captivated you become, while the riddles of their being may eventually help you to solve the riddle of you own. In the words of Goethe, whose intuition nearly a century ago led him to detect and expound the law of development in plants which we to-day are accepting as the basis of botany, let us remember that "Nature is always true, always serious, always severe; she is always right, and the errors and faults are always those of man. Him who is incapable of appreciating her, she despises; and only to the apt, the pure, and the true does she resign herself and reveal her secrets."

II. *The Arctic Shell-beds of the Clyde.* (Abstract.)

By Mr R. W. Macfadzean.

In this paper Mr Macfadzean refers chiefly to the post-tertiary deposits at Garvel Park, Greenock, where the surface of the Old Red Sandstone crops up in a series of ridges with deep hollows between, and the post-tertiary clays lie in these hollows reposing on the denuded surface of the boulder clay, and near the level of present low water. The whole deposit is from 20 to 30 feet thick, and may be divided into several strata, only distinguishable from each other by their contents, for they glide into one another without any perceptible break, and suggest the idea that they are the result of one continuous though varied marine action. There is first a layer of fine clay containing no shells, over which lies the shell bed, in which the chief interest is centred. The fossils preserved in it are perfect in outline, and the bivalves such as *Astarte Sulcata*, *Cyprina Islandica*, and *Pecten Islandicus*, are mostly found with the right and left valves in the juxtaposition of life. They are of a more arctic character than the inhabitants of the present seas; and with the exception of some

broken and accidental forms, littoral shells are absent, while the presence in great numbers of deep sea microzoa and mollusca proves the pelagic character of the deposit. Above this shelly clay there is a zone of clay without shells, covered in its turn by a layer containing recent and littoral shells. In no other deposit have the arctic deep sea and the temperate littoral periods been so well divided. There succeeded to the last Glacial epoch a gradual but comparatively rapid rise of sea level until the Garvel Park was immersed to a depth of at least 600 feet, and it became the habitat of an arctic pelagic fauna. During this rise considerable denudation of the boulder clay took place, a fresh ledge of which was annually disintegrated. The constant change of conditions, currents, and materials gave rise to the greatest diversity in the deposits, and during the rise and subsequent fall of the sea level our present shores became successively the littoral, the laminarian, and the pelagic zone, so that in many localities all kinds of bivalves are found mixed together in the same bed. It was contended by Mr Macfadzean that, as the same evidences are also found in Scandinavia and in N.E. America, the rise and fall of sea level were universal and simultaneous over this quarter of the world. He exhibited a classified collection of shells obtained by him from the Garvel Park deposits, and offered to present it to the Society if it was thought of sufficient interest to the members.

III. *The Ancient Lake Dwellings of Scotland.*

By Mr G. F. Black, Corresponding Member.

Mr Black, in a lengthy communication on the above subject, referred to the first discovery of lake dwellings in Scotland in 1781, and to the explorations carried on at Zurich in 1853-4. Since 1857 several have been noted in this country, and described by various archæologists, especially that at Lochlea, Tarbolton, Ayrshire, by Dr Munro and Mr R. W. Cochran Patrick, M.P. In reference to this lake dwelling, Mr Black gave a minute description of the size and situation, and a list of the various relics found during the explorations. Mr Black remarks that lake dwellings have been found at Lochmaben, Sanquhar, Friars' Carse, Loch Orr, Lochwood, Closeburn, Corncockle, and in the parish of Morton, in Dumfriesshire; and, in conclusion, suggested that

this Society should undertake the investigation of any one of these.

The Rev. W. Graham remarked on this paper that he accidentally discovered the lake dwelling in the Castle Loch, Lochmaben, about 40 years ago. He said, "it lies south-west and north-east; in length 50 or 60 yards, and in breadth from 30 to 40 yards. The piles are of oak, and some are cut for upright standards, and others for cross beams. The rafters are cut to suit a roof at an angle of 45 degrees."

IV. *Lovely Polly Stewart.* By Mr James Barbour, Vice-President.

A parcel of documents came recently into my hands, which, on looking over their backings, I found to be legal sweepings, and among them were several wills or copies; but as the name of this Society did not figure on any of the wills I put the parcel aside as being devoid of interest. I had been scanning Ramage's "Drumlanrig and the Douglases," and after putting the papers aside I returned to it, when, after perusing less than a page, I came upon names of persons corresponding to those I had seen on the backs of the wills. I now opened the parcel and made a comparison, and not only did the names correspond, but the persons referred to were the same. There is a copy of the will of William Stewart, who, when residing at Closeburn Castle, and acting as factor for Dr Menteith, was an intimate friend of Burns and the subject of his song, "You're welcome, Willie Stewart," the second stanza of which runs:

"Come, bumpers high, express your joy,
The bowl we maun renew it;
The tappit-hen, gae bring her ben,
To welcome Willie Stewart."

There is the will of Miss Hannah Lee, William Stewart's stepdaughter, a young lady then 21 years of age, residing at Closeburn Castle with her mother and stepfather, and who died at the age of 23. There is also a copy of the will of Mrs Catherine Stewart, wife of Mr Bacon, landlord of Brownhill Inn, where Burns was wont to frequent, and who on one occasion, finding the landlord too fond of thrusting himself into the company of his guests, composed the epigram:—

"At Brownhill we always get dainty good cheer,
And plenty of bacon each day in the year;
We've all things that's neat, and mostly in season;
But why always Bacon?—come, give me a reason."

These papers are interesting inasmuch as they relate to persons who were intimately associated with Burns, and, as we have seen, were themselves the subjects of his verse, and also the immediate relatives of one whose chequered life forms a romantic story, and whose beauty the Poet celebrated in song :—

> " O lovely Polly Stewart !
> O charming Polly Stewart !
> There's not a flower that blooms in May
> That's half so fair as thou art."

Polly Stewart was the daughter of William Stewart, half-sister of Hannah Lee, and niece of Mrs Catherine Stewart, the persons whose wills are here. I do not know that the papers add almost anything to the story of Polly Stewart, but they contain references to herself, and to her family, who are the principal beneficiaries under her father's will. Polly was first married to her cousin, Ishmael Stewart, by whom she had three sons, and the will of Mrs Catherine Stewart bears—" Item, I leave and bequeath to each of William, Charles, and Alexander Stewart's children procreate of the marriage between the now deceased Ishmael Blowfield Stewart, late residenter at Springfield, and my niece Mary Stewart, the sum of five pounds sterling." Mrs Stewart also remembers Polly herself in the matter of dress :—" Item, I leave and bequeath to my niece Mary Stewart, daughter of the said William Stewart, to purchase a suit of mournings, the sum of ten pounds sterling ;" and after leaving another niece five of her best gowns, and three of her best aprons, she leaves the remainder of her clothes to a cousin, " my best silk cloak excepted, which I leave and bequeath to my niece Mary Stewart." Ishmael Stewart, Polly's first husband, had, according to Dr Ramage, to leave the country under a cloud, and dared not return ; and it was never known what became of him. Polly was married a second time to George Welsh, farmer in Mortonmains, granduncle of the late Mrs Thomas Carlyle, a man highly respected, by whom she had two daughters, Hannah and Grace. The marriage proved to be unhappy, and a separation took place, when Polly joined her father in Maxwelltown, where he had come to reside. From his will we learn that William Stewart was residing in Maxwelltown, that he possessed the lands of Bilbow and the houses built thereon, lying in the parish of Troqueer ; he was tenant of three farms belonging to the Duke of Queensberry, and joint-tenant of Kelhead Limeworks, and he held one-fourth share of the woollen manufactory carried on at Cample under

the firm of Stewart, Mathison, & Co. George Welsh, Polly's husband, is named a trustee. Polly is evidently outcast, as no provision is made for her in the will, and she is not named except as the mother of her children. The testator, after making certain provisions, appoints that the whole amount of accumulated stock is to be divided equally among his five grandchildren, viz. — William, Charles, and Alexander Stewarts, and Hannah and Grizel Welshs, daughters of the said George Welsh, and all the five children of "my daughter Polly." A sort of sketch is got of Polly's sons. William is described as having the misfortune of being very lame, and in so bad a state of health that in all probability he never will be able to do anything towards his own support. Charles has already evinced a great degree of thoughtlessness and inattention to his education, and has now entered an apprentice on board a merchant vessel. Alexander is still young and at school, and provision is made for his receiving a college education. Charles continued the thoughtless course indicated in the will, and Alexander also appears to have become imprudent and unfortunate, as we find by references to them in Polly's letters to the late Mr Pagan, King's Arms Hotel, Maxwelltown. "Poor Charles!" she writes, "his fate interests me deeply, his heart was good, his kindness to me when last in Scotland made a lasting impression on my *lacerated heart.*" Again, "the precarious life of my poor Charles produces no hope to learn what became of him; his honest heart was early made to feel the chequered path that marks life. 'Some are made to mourn.'" Of Alexander she writes: "The sudden death of my father proved a fatal stroke to the welfare of Alexander. The volatility of his disposition plunged him into a labyrinth of future misery. Me he deceived at every point; rendered himself wretched and me miserable." The remainder of Polly's own sad story is soon told. At the time she was residing with her father in Maxwelltown, numbers of French officers, prisoners of war, were in Dumfries, and among them a handsome Swiss named Fleitz, to whom she became unfortunately attached. She joined her fate to his, accompanying him to France, where he found employment in the Swiss troops of Louis XVIII. On Louis Phillippe ascending the throne the Swiss mercenaries were dismissed, when Fleitz with Polly returned to Switzerland. Here Polly wrote a number of deeply interesting letters to Mr Pagan, chiefly in reference to her family, of which one or two extracts have been given. After 30 years' absence she returned to Scot-

land in the hope of meeting her son Alexander. She did meet him, but the result was unsatisfactory, and she returned to France. "After some years," says Dr Ramage, "Fleitz died, when Polly took refuge with a cousin in Florence. Her mind at last gave way, and she was removed to an asylum, dying there in 1847, in the seventy-second year of her age. She had survived all her children, who had all died without offspring."

22d May, 1886.

SPECIAL MEETING.

Mr Starke, Vice-President, in the Chair.

The Secretary read the various minutes of former meetings, referring to the "Presbytery House Scheme," and stated that in accordance with the minute of meeting held on 3d April, he had called this meeting.

The Chairman explained the various steps which had been taken in the matter, and stated that this meeting had been called specially "to decide whether the 'Presbytery House Scheme' should be proceeded with or abandoned."

Mr Barbour, vice-president, submitted plans of the Presbytery House, and stated that he estimated the repairs and alterations to cost about £80—£60 on the building, and £20 on painting, gas-fittings, &c.

The Secretary stated that the Presbytery had promised £20 towards the expense, and that he had spoken to several members and friends of the Society, and he had received in this way the promise of £20 additional.

After a general discussion, in which Messrs Dods, Chrystie, Innes, and Thomson took part, Mr Thomson moved—"That the 'Presbytery House Scheme' be proceeded with, and a sub-committee be appointed to issue circulars requesting subscriptions for the purpose, and that when £60 be collected, the sub-committee authorise Mr Barbour, V.-P., architect, to commence operations." This was seconded by Mr Dods, and unanimously agreed to. Mr Thomson again moved, and Mr Dods seconded, "That Dr Gilchrist, Messrs Starke, Barbour, Lennox, Watson, and Wilson be appointed the members of the sub-committee, with full power to make and conclude an agreement with the Synod, Presbytery, Kirk-Session, and Town Council, the parties interested in the Presbytery House." This was also unanimously agreed to, and the meeting afterwards adjourned.

SESSION 1885-86.

Society's New Rooms, 2*d October*, 1885.

ANNUAL MEETING.

Dr Grierson, President, in the Chair. Twenty members present.

New Members.—Mr George Thomson, solicitor, Dumfries; Mr R. P. Fotheringham, Dumfries; Rev. R. F. Mullins, Dumfries; Rev. J. H. Oswald, Miss Mounsie, Miss Nicholson, Thornhill; Mr J. R. Wilson, Sanquhar; and Mr Lindsay, The Holm, Sanquhar.

Donations.—Rev. Mr Weir presented, on behalf of the Presbytery of Dumfries, two books, entitled "Scotia Illustrata sive Prodromus Historiæ Naturalis" and "Insectorum sive Minimorum Animalium Theatrum" (1634). The Secretary laid on the table the Transactions of the Edinburgh Geological Society and of the Edinburgh Geographical Society, donations from these Societies; Vol. V. of the United States Geological Survey, from the Smithsonian Institution; one part of the Microscopical Journal, and several parts of the Transactions of the Edinburgh Botanical Society from Dr Allan.

Exhibits.—The Chairman exhibited a number of minerals and specimens of rocks and some plants collected by him in the north of Scotland in the preceding summer.

Secretary's Report.

The Secretary (Mr J. Wilson) submitted the following report:—In presenting this general report for the past session, I am happy to state that the Society has ever been mindful of the objects for which it was instituted, and has attended to them with some degree of success, as will be seen from the various details which we now submit.

At the Annual Meeting last year there were 204 names on the roll, comprising 4 life, 182 ordinary, and 18 honorary members. During the session 1 life member, 9 ordinary, and 2 honorary members' names were added, but 26 were removed—6 by death, and 20 others due to removal from the district, resignation, or

other causes; so that our membership numbers now 190, or 14 less than last year. Notwithstanding that our membership is smaller a greater number take a more active part in the different meetings. In the winter the usual seven monthly meetings were held, at which 21 communications by 14 different members were read and discussed, this being 7 more than last session, and unequalled in the history of the Society. Several of the papers read are of great importance, and testify to the usefulness of the Society in investigating our local antiquities as well as the fauna and flora of the district. The usual five Field Meetings and a special one in the end of July were held, all of which proved both instructive and enjoyable to those participating in them. The average attendances at these meetings were 32·1 for the winter and 30·1 for the summer, being larger than those of last year, which were 31·6 and 20·4 respectively. On the 22d of May last, a Special Meeting was held, at which it was unanimously decided to proceed with the scheme for obtaining possession of suitable rooms for the keeping of our books and specimens, and for holding meetings more frequently. A Special Committee—consisting of Dr Gilchrist, President; Messrs J. Gibson Starke and J. Barbour, Vice-Presidents; Mr J. Lennox, Treasurer; Mr Watson; and Mr Wilson, the Secretary—was appointed to make and complete the necessary arrangements, and to collect subscriptions towards defraying the expense. This has been done, and through the kindness and liberality of a number of ladies and gentlemen interested in the Society, we have now taken possession of our own rooms on lease for 15 years at a nominal rent, and I believe when the balance sheet will be made up, free of debt, without drawing on the ordinary funds of the Society. The importance of this undertaking cannot be overestimated, for it will supply a desideratum long required for extending our usefulness.

There were 12 Committee meetings and several other meetings of the Special Committee held during the session, all of which were well attended.

The transactions for the years 1880-83, which had been prepared last session, have been issued to the members in November last free of charge. A sub-committee has been appointed to prepare them for the sessions 1883-84 and 1884-85, and this is so far done as to be ready for the printer when desired.

The donations of specimens have not been so numerous as last

year, and owing to the arrangements for the new premises being under consideration, they were not deposited in the Observatory Museum. The donations of books were more numerous. In addition to the annual reports or transactions of the following Societies—The Smithsonian Institution, New York Academy of Sciences, the Peabody Museum, the University of Christiana, the Geographical Society of Scotland, Edinburgh Geological Society, Glasgow Archæological Society, Glasgow Natural History Society, Perthshire Natural History Society, Berwick Natural History Society, The Essex Field Club, Huddersfield Natural History Society, and the South London Microscopical Society—we received nine parts of the Linnean Society's Transactions from Mr Robinson-Douglas, one part of the Microscopical Journal and seven parts of the Edinburgh Botanical Society from Dr F. Allan, and a number of pamphlets on Archæological subjects from Mr G. F. Black. The Society has made an important addition to the Library by purchasing Vols. I. and II. of Bain's Calendar of Documents. All these books have been circulated among the members, but imperfectly owing to the want of proper library accommodation.

Having thus briefly narrated what has been done in the past, let me add a word or two with regard to the future. I expect we shall have a sufficient number of communications to fill up the ordinary meetings of the ensuing session, and therefore we should utilise our rooms by having a course of bi-weekly meetings, or lectures, for the benefit of the junior members. We have sufficient accommodation for specimens of all the local birds and fishes, as well as for innumerable beetles, butterflies, and other insects. If each member would undertake to add to our collection a single specimen, the present empty cases would be well filled by our next annual meeting. We would then have a better opportunity of studying the lower creation, and learning that—

> "In these Thy lowest works, yet these declare
> Thy goodness beyond thought and power divine."

This report was cordially adopted, and the Secretary awarded a vote of thanks for his honorary services. The Rev. Mr Weir, in seconding the motion, expressed on behalf of the Presbytery of Dumfries, the satisfaction which that body felt at the alterations and improvements made by the Society on the Presbytery House.

Treasurer's Report.

The Treasurer (Mr James Lennox) submitted his annual statement, showing the Income and Expenditureto be as follows :—

Income.				Expenditure.			
Balance from Session 1883-84	£25	12	3½	Printing of Transactions..	£14	15	0
140 Subscriptions at 2/6...	17	10	0	Excavations at the Old Bridge	1	4	6
Entrance Fees	0	17	6	Bain's Calendar of Documents (2 vols.) ...	1	6	0
1 Life Member's Subscription	2	2	0	Printing of Circulars, &c.	3	1	6
Arrears	1	5	0	Secretary's Outlay ...	7	19	0
Transactions and Flora sold	1	0	6	Treasurer's Outlay ...	0	4	1
Interest	0	2	3	Balance due Society—			
				In Bank	18	17	6
				In Treasurer's hands ...	1	1	11½
	£48	9	6½		£48	9	6½

"Audited and found correct."—(Signed) Wm. Bailey.

This report was unanimously adopted, and the Treasurer was also thanked for his honorary services.

Election of Office-Bearers.—The following were elected office-bearers and members of committee :—President, Dr Gilchrist; Vice-presidents, Messrs J. H. Gibson Starke, J. Barbour, W. M'Dowall, and F. R. Coles; Secretary, Mr J. Wilson; Assistant Secretary, Mr R. Barbour; Treasurer, Mr J. Lennox; Committee, Major Bowden, Dr J. Cunningham, Messrs J. Rutherford, R. Murray, T. Watson, A. Innes, J. Neilson, J. Maxwell, J. Davidson, and J. W. Dods.

Notice to alter Rule I.—Mr J. Lennox gave notice that at next meeting he would move that the name of the Society be made shorter, by omitting the word "Scientific" in the title, as is stated in Rule I.

Periodicals, &c.—Proposals to purchase some periodicals and to hold more frequent meetings were remitted to the Committee with power to be dealt with.

6th November, 1885.

Mr Coles, Vice-President, in the chair. Thirty-five Members present.

New Members.—Messrs J. Symons, J. R. Macdonald, C. S. Phyn, J. W. Whitelaw, and S. Grierson, Dumfries; J. Wallace, Auchenbrack, Thornhill; James Paterson, Moniaive; and H. A. Macqueen, Thornhill.

Donations.—The Chairman presented 50 specimens of land and fresh water shells found in the district; he laid on the table notes on *Naias Graminea*, and the report of the Botanical Exchange Club, as donations from Mr Arthur Bennett.

Exhibits.—Mr Rutherford exhibited a tree frog from India and a puss moth; Miss Robb exhibited a number of New Zealand plants and several articles of the Maori handiwork, also a few specimens of limestone and minerals from the neighbourhood of Bristol.

Alteration of Rule.—Notice having been given at last meeting by Mr Lennox, it was unanimously agreed to alter Rule I. so as to omit the word "scientific" in the title of the Society.

The Secretary reported that the Committee had decided to have an intermediate course of lectures during this session, on the third Friday of the month, and to purchase *Science Gossip*, the *Scottish Naturalist*, and the *Micrographic Dictionary*. The Committee's decisions were unanimously approved of.

Communications.

I. *A List of Kirkcudbright Mollusks.* By Mr R. F. Coles, Vice-President.

Last April, at the close of our Winter Session, I was asked to make a list of the Land and Fresh Water Mollusks belonging to our district. Thoroughly to comply with our Secretary's request —to tabulate into some resemblance of the arrangement planned and set forth in the Catalogue issued by the Conchological Society all the species and forms of these interesting creatures likely to be or actually found in our locality—would occupy a great deal more than the leisure-hours of the two seasons at my disposal. I feel, therefore, that some apology is due from me, when I submit only these few mounted specimens, and can give names of only some 44 species out of a total of 132 admitted as British. Two things have caused this—the limited area to which I have confined my researches, and the fact of so many of the mollusks being minute, and, without good typical specimens for comparison, difficult to distinguish. Many of them also are numerous in their genus, *e.g.*, *Vertigo*, with eleven species and five varieties—some of them one-fifth the size of a grain of rice; *Helix*, which has 25 species and about 112 varieties; and *Limnæa*, perhaps the most ubiquitous and prolific of all our aquatic mollusks. Judging by the recently published census of

Mr Taylor, malacology in Scotland is not "done to death," to say the least. There are only some three or four counties from which reports were sent in, and these of the most meagre description. In our own district there have already been good workers, Dr Buchanan White, Mr Rimmer, Mr R. Service, and others. To Dr B. White, I believe, we owe the first actual record, printed fifteen years ago (Sept., 1870) in "M'Diarmid's Handbook of Southwick and Colvend," for which Rev. J. Fraser wrote the botanical chapter. In the list of L. and F. W. Mollusks there given Dr White records thirty-six species, adding "that probably more than a dozen other species inhabit the district." His record contains—*Arion ater*, *L. agrestis*, and *marginatus* (three out of the fourteen slugs known as British), *S. putris*, *V. pellucida*, seven species of *Zonites*, eight *Helices*, *Z. lubrica*, *C. rugosa*, *B. perversa*, *P. cylindracea* and *Anglica*, *V. edentula*, only two *Planorbes*, *albus* and *contortus*, *Ph. fontinalis*, *Limnæa lacustris*, *truncatula*, and *palustris*, *A. fluviatilis*, the decollated form of *B. tentaculata*, *V. piscinalis*, and *Sph. corneum*, with the yellow variety, *flavescens*.

In this list there are seven species which I have not yet come upon, while additionally to it I have found *Pisidium fontinale* and *pusillum*, *M. margaritifer*, *Valvata cristata*, *Planorbus nautileus*, and *spirorbis*, *Ancylus lacustris*, *Zonites purus*, *H. aspersa*, *concinna*, and *Carychium minimum*.

In addition to all these, I subjoin the following names, which have been recorded for the district by other workers :—*Pisidium amnicum* and *nitidum ; Anodonta cygnæa ; Planorbis nitidus* and *complanatus ; Limnæa stagnalis ; Succinea oblonga ; Helix lamellata*, *sericea*, and *ericetorum ; Bulimus acutus* and *obscurus; Pupa ringens* and *marginata ; Vertigo pygmæa* and *pusilla ; Cochlicopa tridens* and *Acme lineata*.

I am unable to mention localities for the above nineteen mollusks, since their names appear simply thus towards the close of Maxwell's "Guide to the Stewartry"—in a list compiled by Mr Service from various sources. There are, therefore, just 60 species recorded of land and fresh water mollusks belonging to the S.W. of Scotland. Any attempt to allocate them to the three counties or to compile a census from them is unhappily at present impossible. This must be left to time and to our own care and interest in the subject. A few words respecting the comparative or rather relative rarity and abundance of the species

may not be thrown away on any here present who may be induced to work in this department. Of the three very common garden snails, *H. Aspersa*, *nemoralis*, and *hortensis*, it is scarcely necessary to say more than that, in most people's opinion, the less we have and see of them the better for our gardens and ourselves. *H. arbustorum* is almost as common, if not indeed in some localities more frequent than *hortensis*. Many of the *Zonites* are abundant — *nitidulus* and *cellarius* especially. *Clausilia rugosa* may be found in the chinks of many an old wall by the score ; *H. hispida* and *concinna* with *v. subrufa*. I have taken dozens off in a very few minutes from under the leaves of strawberry plants ; while you can hardly lift a biggish stone on a crumbly bank of rubbish and "weeds" without seeing *H. rotundata*. Among the aquatic mollusks *Valvata cristata*, *Planorbis Nautileus*, *L. palustris*, and *An. lacustris* are the rarest —the last I have found only in one locality, in the water of Tarff. *Sphaerium corneum* and *Bithynia tentaculata* are to be seen in numberless quantities in many a shallow runlet of the Dee, more particularly near Threave Castle.

And now, lastly, for a brief paragraph of suggestion to any members who may be induced to give the help of their enthusiasm in working out the distribution of our mollusks. It is always pleasant to break up virgin soil—to work in a new field—to explore. And in hunting for mollusks in Galloway and Dumfriesshire there is, besides this charm, the added attractiveness of its beautifully-varied natural scenery and rock configuration—a potent factor in our botany, and one which, I am sanguine enough to think, may be quite as interesting in almost every other department of natural science. Other motives for collecting mollusks are, the comparative easiness of the work, the slight outfit required, the small space into which your specimens can be stowed, ready at any moment for reference and study. Then the actual charm of the quest itself, *e.g.*, the exciting events of a good day's dredging over a lonely loch, hauling up with your stout line and grapple perhaps a cluster of *Anodontæ*, or an antediluvian boot, a battered and rusty axe head, or some long searched for tiny mollusk like *Planorbis nautileus*, or a rare aquatic plant ; the delight of watching, as you lie full length on the flowery brink of some pellucid stream, its tiny deeps and shallows, with the minnows "staying their wavy bodies 'gainst the stream," or its amber pools where innumerable *Limnæi* and

Sphaeria are curiously gliding, and floating shell downwards; while further up, where peaty linns look bottomless, and the pike gourmandises on everything he can get a hold of, with what a sense of victory you haul in your bag net and, letting the muddy water drip out of it, behold some new or rarely caught mollusk in the hey-day of his spirits, wondering with his blind but sensitive tentacles what in the world has come over the "spirit of his dream" in the sunless depths where long-rooted pond-weeds spread their canopy of dusky green.

There are several points with respect to the life-history of our mollusks worthy of careful and patient observation and record. For example, there is the controversy over *Helix nemoralis* and *H. hortensis* to settle. We could each add our quota to the elucidation of this vexed question were we to note whether these reputed species breed together, whether they at all seasons are found in one and the same locality, what their food is, what, in short, are their points of resemblance and of distinction. In carrying out the practical study of our L. and F. W. mollusks, it is always well to note down, at the time of capture, what is the plant they appear attached to, and, when coming indoors, preparatory to killing your specimens in boiling, literally *boiling*, water—the only merciful and instantaneous method of disposing of them—to note particularly the general colour of the body, the surface-texture of the back, and the shape of tentacles and "foot," with an approximate indication of their length as compared with the length or diameter of their shells. After leaving your mollusks for a few hours in the water, a little neat and skilful manipulation with a bent pin will, in nearly all cases, fetch out the soft parts, leaving you with a shell more or less clear, but always worth reverent examination, and revealing, under the lens, curves of sculptured traceries and hues prismatic to an amazing degree. Think for a moment of what has yet to be done in ascertaining the causes of variation in species, sub-species, and variety. There are certain species like *Limnaea peregra*, whose capacity for variation in shell form is something astonishing. We could—or we may some day at any rate—arrive at a clue which will help us in threading out towards the truth a path through the labyrinths of these seemingly lawless creatures—absolute Robin Hoods of the submerged forests of our tarns and streams—if the facts of their lives and their general surroundings were only narrowly and well watched.

Other points arise in the study of these numerous but easily passed over creatures. For instance, I am fond of thinking that it is only to cloak our laziness and ignorance that we divide and sub-divide Creation into orders and genera and species. There are always, if not in our own Flora and Fauna, then in some other, links between one genus and another; and, if we only knew more, we should readily admit that really there is no such thing as "species," or, rather that what we call a "species" is only the outcome at one particular epoch, a climax, of innumerable gradations in forms of being. It is doubly interesting, therefore, to be able to fill up an admitted gap in the natural sequence. By finding, for the first time in Kirkcudbright, this little shell, *Valvata cristata*, one day amid hosts of *Planorbis albus* on the floating pondweed-leaves, one of these links was made clear to me. *V. cristata*, not only by internal organisation, but by shape of shell, connects most palpably the Genus *Planorbis* with the Genus *Valvata*. *Planorbis* has a flat discoid shell, in many species perceptibly convex, indeed, on both sides. Compare one of them with the commoner *Valvata* (V. piscinalis) of our Fauna, and see the difference. Then note how neatly and timeously this tiny *cristata* comes in to blend the two genera, with its shell, as Gwyn Jeffery remarks, "perfectly flat in all stages of growth"—so like a *Planorbis albus*, and yet so unmistakably a *Valvata* in texture and colour, and those more subtle distinctions which make the real difficulties of science. In the same way *Physa acuta*, a European species, connects our two species of *Physa*, *hypnorum* and *fontinalis*; and another shell, which we ought to get in our district, *Zonites fulvus* is the link between the true *Zonites* and the true *Helicidae*. I might multiply instances of this kind; but as this is not a lecture upon Malacology, I must refrain. My object is merely to suggest the direction in which many of us might find plenty of work and study on taking up the subject of mollusks and shells. I repeat, in conclusion, that, in addition to the healthful pursuit of watching and hunting for these strange little creatures, there are no obstacles such as expensive tools or accessories of any kind in the path of the adventurer. Even time is not so much a *desideratum* as in almost any other Natural History pursuit. Some scores of pill boxes of various sizes, an old mustard tin or two, a long stick to which a salmon gaff or a bag-net can be quickly fitted, and, I must add, a passion for dabbling in cool, clear-

running streams, with strength of will enough to probe the unsavoury mysteries also of stagnant ditches—with this simple outfit there is no reason why any one of ordinary intelligence should not soon become an expert mollusk-hunter, and not only gain health of mind and body, but add his facts to the ever-increasing sum of knowledge.

II. *A Day on Ben Lawers* (Abstract). By Mr J. M'Andrew.

In this paper Mr M'Andrew described a visit made in company with sixteen other botanists, under the guidance of Dr Stirton, to this celebrated district. The visit to Ben Lawers was made on Saturday, 18th July, 1885, from Killin. To botanize Ben Lawers alone, Lawers Hotel is the most convenient inn to stay at, but Killin is more central for the whole Breadalbane range of mountains. Dr Stirton proved an excellent guide, as he has botanized the mountain for all sorts of plants for the past 30 years, has been nearly 80 times on the Ben, and knows all its best spots, and has made many discoveries on it. The ascent of the mountain is neither difficult nor dangerous, but it is very tiresome to "work," owing to the rough and rocky nature of its surface. It is among mountains of mica-schist like Ben Lawers that are found deep glens, rugged ravines, and abrupt precipices. This rock formation flanks more or less all the principal mountain chains in the world. The western ravine is thus described—"Rocks of all forms and sizes, jagged points protruding through grassy slopes, huge boulders over and under which the botanist must crawl to secure his treasures, dashing mountain rills, and splashy wet ground were the characteristic features of the ravine." "The eastern ravine is much narrower, and there are no high rocks in it—in fact, it is a deep gully in the mountain with large broken rocks in it. At the bottom of these eastern corries lies Loch-na-gat."

Ben Lawers is the Scottish paradise of Alpine plants, no other mountain in Britain equalling it in the richness and variety of its Alpine flora. The Clova mountains come next to it, and in many respects are a formidable rival. Botanists from all parts of the world have for a long time, and especially for the past thirty years, trod its mica-schist, and botanized in its ravines, and have returned to it with increasing affection and admiration, and yet its botanical treasures are not exhausted, for almost every year reveals some of its hidden rarities. By turning up "Hooker's

British Flora," "Hobkirk's Synopsis of the British Mosses," or "Leighton's Lichen Flora of Great Britain," any one can convince himself of the great number of plants recorded from Ben Lawers. It may be asked—Why is Ben Lawers so famous for Alpine plants? Several reasons may be given—Its friable mica-schist affords an excellent soil for plants, its rugged and varied surface, and its immense ravines, running towards the east, with their boulders, rocks, corries, and even rills, give shelter to rare cryptogams; its frequent dews and mists afford abundant moisture; its rocky ledges and grassy slopes afford resting places for plants; it is high, 3984 feet. Its rills have *Saxifraga aizoides*, *Oxyria reniformis*, &c.; its grassy slopes are carpeted with *Alchemilla alpina*; its damp places have *Tofieldia palustris*, *Juncus biglumis*, and *triglumis*; it is the only British station for the beautiful *Myosotis alpestris;* it has *Saxifraga hypnoides*, *Cherleria sedoides*, *Sibbaldia procumbens*, *Salix reticulata*, *Cerastium alpinum*, &c.; while near the summit may be found *Saxifraga cernua* and *rivularis*; and in sheltered crevices everywhere *Aspidium Lonchitis*, *Asplenium viride*, and *Cystopteris fragilis*. Ben Lawers is very deficient in three genera of mosses—the *Andreæa*, the *Sphagna*, and the *Campylopi*. Some of the rarer plants are becoming extinct, as *Hypnum Halleri*, *Stylostegium cæspiticium*, and a few others. *Carex ustulata* once grew on Ben Lawers, and was considered extinct in Scotland, but has been confirmed for Perthshire this summer. Its Cryptogamic Flora has a very close affinity to that of Scandinavia. We find grass on Ben Lawers up to the very summit, with no heather. The water of its rills and streams is clear as crystal and cold as ice, everywhere perfectly safe to drink. In one of the two papers on the "Mosses of Ben Lawers," given in the Transactions of the Edinburgh Botanical Society, Dr Stirton says:—"There is no other mountain in Scotland I have climbed that presents such curious and perplexing anomalies in its cryptogamic vegetation. Almost at every step in the more favoured spots the botanist meets forms which seem to mock his powers of discrimination, and above all to warn him that nature is not to be cramped and confined by any classification of man's devising."

III. *The Botany of the Sanquhar District.* By Dr A. Davidson.

Last year I addressed you on this, among other subjects, and though it gives me much pleasure again to add a few, and I hope

not unimportant, facts to Topographical Botany, I regret to think that Field Botany in the neighbourhood of Sanquhar has a limit, and though my researches have been pushed in the least frequented and unexplored districts, I have been unable to add so many new localities and species as I did last year, when the district was practically unexplored. I will in this paper then speak of the Sanquhar and Kirkconnel parishes only.

Viola lutea, the yellow pansy, is abundant on all the upland meadows, and, along with the variety *(V.) amœna*, forms in many parts quite a pleasing feature in otherwise barren districts; but in no place do they appear in such variety and profusion as at Wanlockhead, where they bedeck the green swards with their variegated petals as richly as do the gowans on the lowland meadows, while the heaths are in like manner enriched by the golden bloom of the pretty whin, *Genista anglica*. The knob-berry, *Rubus Chamæmorus*, is also found here in fair abundance, and in a few of the glens *Saxifraga hypnoides* is not uncommon, but few other flowering plants have been able to find a footing in the wet and sedgy soil of these gloomy uplands. *Spiræ salicifolia*, the willow-leaved spiræ, has become naturalised in Elliock woods. *Arctium intermedium* has been found in two or three localities in the parish, and *meum athamanticum* has for the first time been discovered growing in abundance on Carco Hill in Crawick. *Andromeda polifolia*, wild rosemary, on Sanquhar moor comes as a welcome addition, and *Myosotis cæspitosa*, not considered common in Dumfriesshire, is found in fair abundance on upland rills. *Galeopsis versicolor* is very abundant; and the terrestrial variety of *Polygonum amphibium* has been found in one locality. *Lamium album*, *Helianthemum vulgare*, the rock rose, and the tuberous comfrey, *Symphytum tuberosum*, have been found in Kirkconnel parish, the latter established near the railway station, and on many parts of the line is probably an escape. New localities have been recorded for *Salix pentandria*, and the crack willow, *S. fragilis*, is a native of Elliock Woods. In September last I was delighted to find *Epipactis latifolia* flourishing in the woods of Crawick; and though that has only been recorded in the Statistical Account of Dumfriesshire as natives near Tinwald and Dumfries, it is probably not uncommon, being easily overlooked. Its presence in Crawick is in all probability due to the preservation of the natural woods on that river. *Menthar piperita*, found in one or two localities, is probably an escape.

Last year, from examination of an imperfect specimen of the yellow lily from Sanquhar Loch, I hazarded the opinion that it was not *N. pumilum* as recorded, but *N. intermedium*, and to make certain I this season forwarded a few specimens to our distinguished member Mr A. Bennett of Croydon, who, always willing to lend a helping hand to amateurs, pronounced it to be what I surmised it was. This, then, you will observe, is an important addition, as at that time it was only found in two localities—viz., Northumberland and Perthshire. Since then, however, Mr Jas. Fingland, Thornhill, has found near Moniaive a plant apparently similar, but of this Mr Bennett is not yet quite assured. The long-headed poppy, *Papaver dubium*, is abundant on the Sanquhar and Kirkconnel railway track, and the variety *rivalis* of *Mentha sativa*, not previously reported from this shire, is in this district the most abundant of all the mint tribe. Monk's rhubarb, *Rumex alpinus*, has established itself near Euchan Head, having probably escaped from the gardens there. *Juncus supinus* is not uncommon, and a variety called *fluitans*, not noted in the London catalogue, grows abundantly in Auchengruith mill-dam. This is a somewhat rare plant, and Mr Bennett informs me it has been recorded from Perthshire, Forfar, and Ireland. The variety *amœna* of the yellow pansy, as before stated, is quite common. Two new willows also deserve mention, viz., var. *(a)* of *Salix purpurea* and *tetrapla* of *S. phyllicifolia*. I may here call attention to the omission of *Salix alba* from our local flora, which, though not a native, is quite as deserving a place as *S. viminalis*, to which the same remark applies. In the investigation of the varieties of *Rosa canina* good progress has been made, and I am able to report the following five new varieties, viz.:—*urbica*, *dumetorum*, *tomentella*, *coriifolia*, and *verticillacantha*, and probably *pruinosa*, and another variety coming under no distinct category, resembling *verticillacantha* in all points save the sepals, which are turned up and persistent. These make, with those found last year, eleven varieties of the dog rose, and from all likelihood more will be discovered. Two casuals deserve mention on account of their rarity, viz., *Galium tricorne*, found near Sanquhar station, and *Symphytum asperrimum*, not a British plant, in a corn field near Auchengruith, and probably introduced with seeds. In Kirkconnel parish four new plants were discovered, viz.:—*Thalapsi arvensis*, near Carco; *Anthemis Cotula* and *Convolvulus arvensis*, on the railway

embankments; and *Erysimum cheiranthoides*, near the railway station, a casual far removed from its native habitat, the fen districts of England.

Before dismissing this subject one plant deserves special notice. This is a carex, new, as far as I am aware, to Scotland. It is common on the higher hills, and its form is probably familiar to most of you, who, on the authority of the local catalogue, have passed it over as *C. Œderi*. I knew the plant was not *C. Œderi*, as I had gathered the latter on an excursion in the north, but I did not consult any authority on the subject till this season, when I submitted it to Mr Bennett, who pronounced it to be *C. flava, minor* (Townsend). *Carex Œderi*, with which it has possibly been confounded, I have failed to discover, and doubted its existence until Mr Fingland, Thornhill, showed me some specimens gathered from some locality near Ruthwell. These remarks then comprise all I can record as new to the county, but do not by any means indicate all that has been done in Upper Nithsdale and elsewhere. Mr Brown, Auchenhessnane, has found *Lathæa Squamaria* in the woods there. Mr James Fingland, Thornhill, has added many new habitats and not a few new species to the Flora of Dumfriesshire.

Before taking farewell of this subject I have thought the present an opportune time for recording the census I have taken of the plants in Sanquhar Parish. These of course may by more careful examination and analysis be increased, but up to the present time 440 species and varieties have been found, and their localities separately recorded for future reference, or for the use of this Society if the members so will it. Of these 440, 7 are casuals introduced with or as seeds, 10 are garden escapes, and 14 are planted trees or shrubs. These numbers may seem small when compared with those recorded from more southerly parishes, with more productive soil, and more congenial climate, yet when we consider the comparative sterility of this district, with its cultivated fields but plots in a dreary waste of heath and moorland, this number is remarkable, and I fondly hope, if future years see additions to their number, that I may be the fortunate contributor.

4th December, 1885.

Mr Barbour, Vice-President, in the Chair. Thirty-six members present.

Donations. — Mr Rutherford presented two photographs of places visited at the Summer Excursions. The Secretary laid on the table Part II. of the Transactions of the Huddersfield Natural History Society, also three engravings of the Ruthwell Cross as a donation from Mr Black.

Exhibits.—Mr T. Brown exhibited a case of Birds' Eggs. The Secretary exhibited a Hydra *(Hydra viride)* and the Sea Mouse *(Aphrodite aculeata)*, and briefly described them.

Communications.

I. *A List of the Birds of Tynron Parish.*
By Mr T. Brown.

It was rather reluctantly that I consented to read a paper to our Society, not from any unwillingness to serve it, but because I did not consider that I had studied any subject sufficiently to make a paper interesting. The Secretary would not be said nay, however, so I have prepared a list of the birds of Tynron, with remarks on some of them. On the table is a specimen of each bird's egg, excepting the Short-eared Owl, Barn Owl, Redwing, Marsh Tit, and Goldfinch. Where the eggs of any species vary much, there are two or more. I purpose giving first those birds that have been known to nest in the parish, then those that have not. The list contains 86 birds, very nearly a quarter of those on the British list, which is rather a large number, considering the size of the parish; but the variety in the ground may account for this, the upper part being bare moorland and the lower part well wooded and chiefly cultivated land. Birds that frequent water are poorly represented, there being nothing worthy of the name of a loch. Probably the list is not complete, as last summer I found two birds nesting of which I was not previously aware.

The first bird on the list is the *Merlin*, which is rare. A pair nested for many years on the steep heathery slope of a wild mountain glen, but they have not been seen since 1883. The *Kestrel* is yearly becoming less numerous, still a few pairs breed, generally on ledges of the rocks. The *Sparrow Hawk* is rare, and its nest has not been seen for a year or two. Fifteen or twenty years ago their nests were common. Occasionally the common

Buzzard is seen, sometimes at a great height, sailing slowly and gracefully in circles—at other times hunting along the hillsides. The grouse appear to be very much afraid of this bird, as, on two occasions, when one crossed the valley to the opposite hill they seemed to clear off it altogether in the wildest manner. A pair of buzzards nested until three or four years ago on a rock on the farm of Appin, but they have not returned since their young were taken from the nest by some labourers, who had been working in the district. It seems a great pity that such fine birds as the hawks should be persecuted as they are. The harm which the larger ones would do to game would be but trifling, while some of the smaller ones feed largely on vermin. The *Tawny Owl* is common in the wooded parts, nesting occasionally in a hole in the ground, but more frequently in hollow trees. Books on British birds give the number of its eggs as from three to five, but although not a season has passed for a long time without my knowing of one or more nests, I never saw more than three, and in four cases out of five, not more than two eggs. The *Long-eared Owl* is rare. It evidently lays its eggs in pairs, at a considerable interval, as in a nest of four found recently two were almost hatched, while the other two were not more than half. From the situation of a nest (amongst heather) found many years ago, it must have been that of the *Short-eared Owl*, the only instance of its occurrence. But once has the nest of the *Barn Owl* been observed, in a rabbit-hole. The female was wantonly shot. The *Spotted Flycatcher* is plentiful. On all the streams the *Dipper* is found. This bird sticks very closely to the same nesting site, there being several places, generally by a water-fall, which are never without a nest. The same nest is used year after year, if not carried away by floods. The moss of which the outer part is composed, being gathered fresh from the stones by the burns, frequently grows, when the situation is a damp one, forming a dense water-proof covering for the lining of grass, the only part which seems to require annual repair. There are almost invariably four or five dry oak leaves as an inner lining. The eggs of a pair of Dippers were taken last year, and the birds laid a second time in the same nest, a very unusual occurrence, not, however, until they had another a few hundred yards from the first almost completed, when it was swept away by a swell in the river. They evidently considered that time would not permit of their building

a third nest; so they returned to the first, where they reared their brood in safety. The *Missel Thrush*, almost the earliest songster, is common. On one occasion I saw a pair of these birds attack a hen that was passing near their nest. It was only this season that the *Song Thrush* appeared in anything like the numbers in which it was found previously to the severe winter of 1879-1880. The *Blackbird* is plentiful, too plentiful, we think, during the fruit season. The *Ring Ouzel* is found on all the hills building its nest, which is very like the blackbird's, amongst the heather, in the ivy which clings to some of the rocks, or in juniper bushes. The *Hedge Sparrow*, whose nest, owing probably to the beautiful colour of the eggs, is robbed so often by boys, is common. That bird, which is a general favourite, in spite of its pugnacity, the *Robin*, is very common. No other bird becomes so familiar with our dwellings. Some time ago one began to come into our house, by and bye getting to spend the whole day indoors, entering in the morning before there was much light, and remaining until quite dusk, never, however, overnight. During the cheese-making season its headquarters were in the dairy, when it fed on the curd. When the supply failed there, it betook itself to the kitchen, clearing up the crumbs from the table and floor after meals, or baking operations. Its favourite perch was the edge of a pan which hung from the ceiling, where it sat and sang for hours daily. Any noise in the house, particularly the scrubbing of the floor, never failed to set robin a-singing. On washing day it was sure to be found in the midst of the hubbub, walking about amongst the tubs and people quite at home, and singing all the time—sometimes in a low, sweet strain scarcely audible, at other times quite loudly. It never seemed at ease when one of the male sex approached. Suddenly it disappeared, to our sorrow, probably having fallen a prey to a cat, the end to which more pet birds than that robin have come. The *Redstart*, *Whinchat*, and *Wheatear* are all common. There is rather a remarkable Redstart's egg on the table, having a few spots at the larger end. The nest of the Wheatear is very difficult to find, partly on account of the prevalence of stone dykes, which form their favourite nesting site. Occasionally they take to a rabbit hole. Both the *Whitethroat* and *Garden Warbler* are numerous, particularly the former. A pair of *Blackcap Warblers* nested in 1883 and 1884 in one of our wooded glens, but last year they

were not observed. The song of this bird is very loud and clear. The *Wood Warbler* and *Willow Warbler* are abundant, the former having increased in numbers greatly during the last dozen years. When Macgillvray wrote it was not recorded from the north of Scotland, but in June of 1883 I heard numbers of Wood Warblers about Balmacarra, and all along the wooded banks of the Caledonian Canal, from Inverness southwards. There is almost no doubt but that the *Chiff Chaff* visits the parish, but I have not seen its nest, and cannot distinguish the bird from the Willow Warbler. Numbers of the *Golden-crested Wren* are found in the woods, particularly where there are pines. That very active little bird the *Wren* is plentiful. It is a pugnacious little fellow. One day, when the ground was covered with snow, I observed two fighting, rolling about until quite draggled, and so fatigued that they could hardly fly away. It adapts the exterior of its nest beautifully to the surroundings. Two of which I knew last year could not have been detected but for the small hole in the side. One was in a clump of withered fern, and composed chiefly of the same material. The other was against the trunk of a moss-covered ash tree. The birds had got under the moss, raising it sufficiently from the stem to allow of their making the nest completely underneath it. The *Tree Creeper*, whose bill is so admirably adapted for securing its food from underneath the bark, is not rare. The *Great Tit*, *Blue Tit*, *Coal Tit*, and *Long-tailed Tit* are all common, especially the two first. I saw a proof of the strength of the Great Tit's bill on one occasion when it picked up a grain of Indian corn, with which it flew to a tree. After pecking at it for some time the corn was dropped, and on examination was found to have a considerable hole in it. *Pied* and *Grey Wagtails* are common. The *Tree Pipit*, whose eggs are said to vary more than almost any other British bird, is abundant. The *Meadow Pipit* is by far the most numerous of the small birds in the parish. A few pairs of *Sky Larks* are found on most of the hills (generally near the top) during the spring and summer months. Their song is one of the sweetest, and rendered particularly charming under the circumstances in which we often hear it on the Tynron hills. The duties of those who have charge of sheep lead them, during the latter part of April and first half of May, to be on the hills by daybreak, and with a fine morning, the air of the freshest, the sun rising gloriously in the east, a view stretching to Criffel, the

Solway, and the English hills, and the song of several larks overhead, no one who has any love of nature can fail to be enchanted. The *Yellow Hammer* is not uncommon. The *Chaffinch*, which builds such a neat nest, comes next, in point of numbers, to the Meadow Pipit. After reading White's "Natural History of Selborne," in which he states that the male and female Chaffinchs separate during winter into different flocks, I noted those in our district, and found that at least nine out of ten were males. Two nests of this bird were observed in the end of April last, quite ready for eggs. They were frequently examined, and set down in the end as forsaken nests. On June 9th, however, they were found to contain four eggs each, quite fresh in one, almost quite fresh in the other. The change in the weather must account for this, April being mild, while May was remarkably cold throughout. The *House Sparrow* is abundant. The *Greenfinch* is not very common. The *Goldfinch* is very rare, and known only once to nest. The *Lesser Redpoll* and *Linnet* are met with in considerable flocks during winter. A few pairs remain to breed, and the number of Redpolls which do so has increased considerably during the last two years. The *Bullfinch* is not uncommon. A few pairs of *Starlings* nest regularly, besides those that are accommodated in boxes, put up for the purpose. The *Carrion Crow*, which is not a favourite, is common. Unlike the rook, it gathers the sticks to make its nest from the ground, using "heather birns" exclusively, lining with a plentiful supply of wool. It destroys great numbers of eggs, chiefly those of the Red Grouse, and also occasionally attacks weakly lambs. A few years ago I found a lamb with both eyes and its tongue picked out and still alive. There are several rookeries in the parish, chiefly in the valley of the Shinnell, but in some of them the Rooks are very much persecuted. In the end of April, 1884, a pair commenced to build their nest at Auchenhessnane; probably they were banished from a rookery for misbehaviour. They were allowed to rear their young, and this year there were ten or twelve nests. It is very interesting to watch them during the nesting season. I never saw a Rook take a stick for its nest from the ground. They invariably break them from the trees, not even condescending to pick up those that they accidentally drop. The greater part of the twigs were taken from larches, which had several dead branches, and were consequently easily broken, but occasionally they went to ashes and birches. They showed a

good deal of calculation when they chanced to secure a stick in the middle of a tree, hopping backwards and forwards among the branches until they came opposite an opening sufficiently wide to admit of their exit. When they want to ascend to their nest they generally do it by a spiral flight. The most difficult part of their building is the laying of the first two or three sticks. They try to balance them very carefully, still, in some instances, depending on the fork they have chosen, they fall time after time. After the first few sticks lie securely the building is an easy matter. The lining is entirely of grass, and they do not complete the exterior before putting in the lining, but keep adding to the height of the nest as they line it. That "honesty is the best policy" is certainly not the Rook's motto. They are, without exception, notorious thieves. No sooner do a pair leave their nest for fresh materials than three or four are in it, tearing it to pieces, evidently, from their hurried manner, quite aware that it may be advisable that the owners should not find them there on their return. Two of the nests were repeatedly attacked by most of the Rooks, but, owing probably to the smallness of the rookery, and certainly partly to the brave defence of the owners, they withstood the attacks. In each case there were three Rooks connected with the nest. One was kept at an outside, but, whenever the other two left, entered the nest, and began some alterations. After a time one disappeared from each nest. A person could not help wondering whether Rooks were sometimes guilty of bigamy, and whether their government was not stricter than that of a certain district of North America. To us Rooks seem all very much alike, still they know each other at a considerable distance. During incubation the female is regularly fed by the male, and I observed that when returning to the rookery with food their partners always recognised them at a distance of a hundred yards or more. Keepers were sent to destroy the Rooks, and shot as many of the birds as they could, pulled down what nests they could reach, and fired several shots through those they could not, hoping to break the eggs. In this they did not succeed, and the birds returned to some of the nests after having been kept off for about twenty-four hours. Although the weather was wet and rather cold, and in two of the nests at least the eggs were almost hatched, the young birds came out all right, but the eggs that were sat upon two or three days before any of the others were not the first hatched. These birds appear to

have a fair memory. Last week a bit of bread fell at my feet, which had been accidentally dropped by a passing Rook. I stood near the bread for some time to see whether the bird would remember to return for it, which it did directly on my leaving. The *Jackdaw* is common, but few nest. The *Magpie* is not often seen. On one occasion I heard a hare screaming piteously, and a short search proved the cause of it to be that it was attacked by two Magpies. The hare, which was scarcely half-grown, was released, but its screams were soon heard again, and doubtless the birds in the end had a meal of it. It was considerably torn on both sides of the head. The *Cuckoo* is common. I have twice seen its egg. The first time it was in a Tree Pipit's nest, and shortly after the eggs were hatched the young Pipits were found turned out. They were replaced, but next day were out again, and all dead. The second time it was in the nest of a Yellow Hammer, but the lawful occupants were not turned out as on the former occasion. This is not so surprising when it is known that that cuckoo egg is now on the table before you. The following are the dates on which the Cuckoo arrived for the last ten years :—1876, April 30th; 1877, April 28th; 1878, May 1st; 1879, April 29th; 1880, May 5th; 1881, May 3d; 1882, April 23d; 1883, April 21st; 1884, May 7th; 1885, April 27th. There is a difference of 16 days between its earliest arrival in 1883 and its latest in 1884. It, like all other migrants, arrives during the night. Both the *Swallow* and *House Martin* are common. This year the Martins, from the same cause probably that affected the Chaffinches, left, for a week or ten days, the morning after their arrival. The *Wood Pigeon* is not numerous, still met with in all the woods. The nest of the *Stock Dove* was once observed, some years ago, under an overhanging bank. The *Pheasant*, *Black Grouse*, and *Red Grouse* are all plentiful. The *Partridge* is common. The *Golden Plover*, whose nest, partly from the cunning of the bird and partly from the colour of the eggs, is so very difficult to find, is met with on all the hills. The *Lapwing* is common, but not numerous. Two years ago a Lapwing was observed attacking a sheep that had come near its nest, at first by standing as erect as possible and flapping its wings in the sheep's face, then by rising on the wing and making repeated dashes at its head, finally causing the astonished sheep to beat a retreat. A few pairs of the *Common Sandpiper* nest regularly on the upper reaches of the Shinnell.

The *Common Snipe* is frequently started from the marshy ground, taking its flight at first in a rapid, zigzag manner. This bird has been called the heather bleater, from the remarkable noise frequently made by the males when on the wing during the breeding season, being considered like the bleating of an old goat. I have seen it stated that it is not known how the noise is made, but Macgillvray says it is made by the quivering of their wings. They ascend high in the air, wheeling round in circles, and frequently descend for some distance very rapidly, and then ascend again to make another descent. It is always during the descent (which they perform with half-closed and apparently motionless wings) that the noise is heard. The *Curlew* is abundant. There was in 1884 what appeared to be an instance of a pair of Curlews trying to remove their eggs because their nest had been found. The eggs were at some distance from the nest, in a shallow drain, out of which the birds seemed to have been unable to roll them. They were replaced in the nest, but the parents never returned to it. The *Land Rail* is not very common, and has decreased in numbers considerably within the last few years. A few pairs of *Moor Hens* inhabit the streams. The *Wild Ducks* are seldom seen, except when frost has sealed up the lochs and rivers, when they take to the mountain springs. The following are not known to nest in the parish :—The *Peregrine Falcon*, seen only once. It appears that the *Pied Flycatcher* has not been recorded from the south-west of Scotland until 1884. On May 13th, by the side of the Scar, I heard a bird whose note was not familiar to me, but resembled that of the Redstart. It proved to be the Pied Flycatcher, a bird which could not, from the conspicuous colour of the male, be in the district without being observed. The pair built a nest, composed entirely of withered grass, the finest being used as a lining, in a hole in an alder tree, about 18 inches from the entrance, in which on May 30th were six eggs of a paler blue than the Redstart's. One was taken as a specimen, four were hatched, and the remaining one contained a half-formed bird. The pair returned this season to the same place, but only three eggs were laid. It is rather strange that none of their young returned to the district. The nest was on the Penpont side of the Scar, but once or twice the birds were seen in our parish. The *Redwing* and *Fieldfare* are met with in considerable flocks. The former was about the first bird to succumb during the winter of 1879-1880. The *Stonechat*

is very rare. The *Sedge Warbler* must pass through the parish, although I have not seen it. It seems that there is no authentic record of the *Marsh Tits* having been found in either Dumfriesshire or Kirkcudbrightshire, but twice last winter a pair were observed along with Coal and Longtailed Tits. *Snow Buntings* are seen every winter, occasionally in large flocks, but more frequently only two or three together. The *Black-headed Bunting* is rare. About most farm-yards one or two *Bramblings* are found, and very rarely a large flock is seen in the fields. Great numbers of *Twites* frequent the lower ground, particularly fields in which *Prunella vulgaris* abounds. Now and then the croak of the *Raven* is heard as it sails slowly along the hills. The *Sand Martin* and *Swift* are not common. The *Woodcock* is not plentiful. A pair were seen in the end of April last, which probably remained to breed, as it would appear their nests are found much more frequently of late years, and gradually extending southwards. I had frequent opportunities of seeing this bird carry its young to feeding ground on the west coast of Argyllshire. During the month of June numbers were to be seen every evening, from ten to eleven o'clock, leaving the woods for marshy ground, with their legs hanging down to their full length and their young clasped between their feet. The *Heron* frequents all the streams. The *Teal* is very rare. The *Black-headed Gull* is abundant. From one to three *Great Black-backed Gulls* are seen occasionally about the hills during the spring months when carrion is plentiful. There is in Dr Grierson's Museum in Thornhill a specimen of the *Golden Oriole* shot in the parish of Tynron some thirty years ago.

II. *Notes on Local Ornithology for* 1885. By Mr W. Hastings.

There is little to note this year regarding anything in the British bird line that can properly be called rare, so far as my observation has gone, although several specimens have been forwarded to me for preservation that are not commonly met with in this district. There was a great scarcity of the *Martin* and *Swift* this year, which usually visit us every summer in considerable numbers. On the other hand, the *Sand Martin* was more than usually plentiful. The *Cuckoo*, too, was more than usually frequent. A great number of them was sent to me from different parts of the country, the majority of them being young birds of this year. In the month of June I had a young *Woodcock* sent

me; it would be about two weeks old, and was the first I ever had bred in this country. It was from the Galloway side. More than twenty years ago, I had two eggs of the Woodcock sent me also from Galloway; these were deposited in the Observatory Museum. Although this bird does not generally remain here to breed, I have been informed that odd pairs have been met with from time to time in various parts of the country, that had remained here and brought up their young. It leaves here in the early months of spring for the north of Europe, and returns about the month of October to spend the winter with us. I have had only one specimen this winter as yet. In the month of October I had a nice specimen of the *Ruff* brought me. It was shot in Carlaverock, and of course was in the winter plumage, and had not the large frill on the neck, which comes on in the spring, when it is in full dress. I have had only one other specimen of the *Ruff* shot in the district. It was shot in the neighbourhood of Lochfoot. It is now in the Kirkcudbright Museum. I have also had a specimen of the *Reeve*, or female, shot in this district. The Ruff used to be not uncommon in some parts of England, especially in the Fens of Lincolnshire, but I am informed they are not common there now, as the Fens have been drained to a large extent, and are not so suitable to the habits of the Ruff as they were formerly. In the month of October I received a nice specimen of the *Quail*, shot in the district. It is very seldom that I have had it. The only one that ever I saw alive I put up in a field in the neighbourhood of Auchencairn, a good many years ago. Some fifteen years ago a pair frequented the fields in the neighbourhood of Barkerlands all the summer. Although I never saw them I often heard them about the gloaming. Their cry resembles the words, "weet mi feet," often repeated. In September last I received a very curious specimen of the *Grouse Hen*. She is of a uniform grey colour all over. I never saw another specimen of the Grouse anything like her. I have also had several *Kestrel Hawks* of a very unusual colour, approaching to white, whereas the usual colour is reddish or reddish-brown. Last month I received a specimen of the *Green Woodpecker (Picus Viridis, L.)* I could not say where it was shot, but it was newly killed when I received it, for it was quite fresh. I have had it sent me from England and Wales, but never had one that I knew was shot in this district. In the beginning of September I had a curious

specimen of a *Duck* sent me. It was of the Pochard class, but unlike any other I ever had. It was of a uniform dull brown, approaching to black on the back and wings —the wings without any beauty spot; the breast and belly of a dull or dirty white; crown of the head dark brown, like the back; cheeks whitish; dark line from the nape down the whole length of the neck; the legs short; feet large; webs black; bill moderate size, and of a dark colour. I thought when I received it that it was the female Scaup Duck, but upon examination I found that it was not that at all. I can find no description of it in any work on Natural History that I have or have had access to, so I conclude that it is a stranger, and is not found in the list of British birds. I have also had several specimens of the *Gannet* or *Solan Goose* sent me from various parts of the country; one procured a long way inland. They are regular sea birds, and splendid fishers. The nearest breeding place for them is Ailsa Craig, in the Firth of Clyde; and they also breed in great numbers on the Bass Rock, in the Firth of Forth. I am of opinion that the specimens which I received are old birds that have lived their natural time, and were dying of old age, as the most of them were pucked-up in a sickly or dying condition. There is a great increase in the number of small birds generally in our neighbourhood, which had been sadly thinned by the severe winter we had some five years ago.

III. *The Ruthwell Cross.* By Mr G. F. Black.

The Cross which forms the subject of this paper stands within the manse garden at Ruthwell, in Annandale, about ten miles from Dumfries. As it stands at present the Cross is reconstructed, it having been found in fragments and pieced together by the late Rev. Dr Henry Duncan, minister of the parish. The extreme length of the Cross is about 17½ feet, of which rather more than 2 feet is embedded in the earth. The shaft is 2 feet in breadth at the base, and 15 inches in thickness. The material is a reddish, or rather a reddish-grey sandstone, probably quarried from the neighbouring hills. The Cross stood in the old church of Ruthwell till 1642, when it was ordered to be destroyed, as a monument of Pagan idolatry, by an order of the General Assembly of the Presbyterian Church of Scotland, which met at St. Andrews on the 27th July, 1642. The column was accordingly thrown down and broken in several pieces, and left lying

on the floor of the church till some time after 1772, when the various pieces were removed into the churchyard in consequence of alterations in the church. In 1802, Dr Duncan finding that it was exposed to injury in the churchyard, had the various fragments pieced together and erected in their present position. Previous to this, however, a portion of the top of the Cross was found in digging a grave to an unusual depth; but the transverse arms are still wanting, those now on the monument having been supplied by Dr Duncan in 1823—"a circumstance," says Fin Magnusen, "which should carefully be kept in mind by all who in future may have occasion to inspect the monument itself, or drawings of it."[1] The broad faces of the Cross are sculptured with Scriptural subjects in relief, and on the sides with scroll-work, also in relief, representing a vine, with birds and beasts on its branches and eating of its fruit. "This was a common representation," say Dr Anderson,"[2] "on Christian monuments, and examples occur at Jedburgh, and on the elaborately sculptured monuments of Celtic character at Hilton of Cadboll, and Tarbet in Ross." This species of ornamentation occurs also on the Bewcastle pillar, and is a strong proof that they are of the same period, and, indeed, they are supposed to have been sculptured by the same person. The figure subjects on the broad faces of the Ruthwell monument are arranged in panels surrounded with flat borders, on which are engraved the inscriptions which give to this monument its special interest. They are in two alphabets, and in two languages—one set being carved in Roman capitals and the other in Runes. The inscriptions in Roman capitals are in the Latin language, and the Runic inscriptions in the Northumbrian or Anglian dialect of the Anglo-Saxon.

Beginning at the base on the north side of the monument, we have a plain Latin cross with the symbols of the sun and moon on each side.[3] Immediately above is a panel containing the annunciation: the Angel Gabriel appearing unto Mary, with the words "INGRESSVS ANGELVS"—"The angel having entered"

[1] "Report of the Royal Society of Northern Antiquaries," 1836, pp. 86-7.

[2] "Scotland in Early Christian Times," 2d series, p. 233. I am indebted to Dr Anderson's book for a few of the above remarks.

[3] According to Dr Duncan, this Cross is "a representation of the Crucifixion, much defaced. Along with our Saviour, the two crucified thieves seem to have been sculptured, and an orb, probably indicating the darkening sun." This statement is certainly wrong; there is no trace of any sculpturing on the face of the Cross, and besides there are distinct traces of *two* orbs, one on each side, which certainly must represent the sun and moon. The symbols occur several times on sculptured stones of the Christian period.

(Vulg. S. Luke i. 28). The remainder of the passage is illegible. The next subject is "Jesus healing the man that was born blind:" "ET PRAETERIENS [IESVS] VIDIT [HOMINEM CAECVM] A NATIVITATE ET S[ANAVIT EVM A]B INFIRMITA [TE]"[4] — "And Jesus passing, saw a man blind from his birth, and healed him from his infirmity" (St. John ix. 1 et seq.) The next panel above contains a representation of Mary Magdalene anointing the feet of the Saviour: "ATTVLIT ALABASTRVM VNGVENTI ET STANS RETRO SECVS PEDES EIVS LACRIMIS COEPIT RIGARE PEDES EIVS ET CAPILLIS CAPITIS SVI TERGEBAT"—"She brought an alabaster vase of ointment, and standing behind, with tears began to wash His feet, and with the hair of her head did dry them" (St. Luke vii. 37-8). On the Gosforth Cross, Cumberland, she is represented as carrying her vase of ointment, which, though particularly mentioned, is not shown on the Ruthwell monument.[5] Above this panel is the salutation of Mary and Elizabeth. The inscription is too much obliterated to be read, but there can be no doubt that it is a quotation from the Vulgate relating to the subject as in the other cases. Again, where the stone curves inwards to the crossbeam, there is an archer pointing his arrow upwards. I am not sure what it means. Possibly it may represent the sign of the Zodiac Sagittarius, which is a common feature in ancient sculpture. The arms being modern, we may pass them by and proceed to the top stone—the most interesting portion of the whole monument, as bearing the name of the immortal author—Cadmon,[6] the Milton of ancient England. This face of the top stone bears the figures of St. John and his eagle, with the opening words of his gospel, "IN PRINCIPIO ERAT VERBUM." We turn now to the southern side. The first panel, corresponding to the one on the northern side containing the Latin cross, appears to have contained two human figures, but they are too much obliterated to be made out. The second panel contains "The Flight into Egypt," considerably mutilated, but showing the words—"MARIA ET IO[SEPH]," "Mary and Joseph," round the margin. The next panel contains a subject from Jerome's "Life of St. Anthony." The reference is to the incident in the legendary life of St. Anthony, who for sixty years

[4] The words and letters within brackets are not now on the Cross, and are supplied from the Vulgate. The words *et sanavit eum ab infirmitate* are not in the Vulgate.

[5] "Memoires de la Societè Royale des Antiquaries du Nord," 1884, p. 16.

[6] I prefer to spell this name *Cadmon* instead of *Cædmon*, as the former is the original Northumbrian form.

was fed by a raven, that brought him a loaf daily, which, on the occasion of St. Paul's visit, they shared between them. The inscription is imperfect, but reads :—"SCS PAVLVS ET A[NTONIVS EREMITAE] FREGER[VN]T PANEM IN DESERTO—"St. Paul and St. Anthony, hermits, broke their loaf in the desert." The central panel on this side is the most important as containing a representation of the Saviour himself in the usual attitude of benediction, and bearing a scroll (the sacred volume) in his left hand. He is here represented, as on the Bewcastle Cross, treading on two swine; while on other early crosses He is frequently shown treading on a worm or a dragon. The inscription is taken from the Apocryphal Gospel of the Nativity, and reads :—"IHS XPS IVDEX AEQVITATIS SERTO SALVATOREM MVNDI BESTIAE ET DRACONES COGNOVERVNT IN DE[SERTO]"[7] :—"Jesus Christ, the Judge of Righteousness : Beasts and dragons knew in the desert the Saviour of the world." Above this panel is another containing the figure of John the Baptist standing on two globes, bearing the *Agnus Dei* on his breast. The only word now legible of the inscription which surrounded this panel is "[A]DORAMVS"—"We adore." The next panel, corresponding to the one on the other side containing the archer, represents two figures face to face, but the subject is doubtful. The top stone on this side contains a bird perched on the last spray of the vine—representing the Dove of Peace. But it is the inscription on the raised border which is of supreme interest—more so than any other part of the monument, from its containing the name of the author of the poem. Professor Stephens, of Copenhagen, has read the inscription as CADMON ME FŒUOTHO = CADMON ME MADE.

As these three words have given rise to so much controversy in the literary world, it is much to be regretted that they cannot now be accurately read on the Cross, as Cardonnel's plate is very inaccurate in this part. I shall say no more about this part till we come to deal with the Runic inscriptions, after describing the scroll ornamentation. And here I cannot do better than quote the words of Dr Anderson in his lecture on the Cross. He says :—"The sculptures on these narrow sides, instead of being figure-subjects in panels, as on the broad faces of the Cross, are running

[7] The part of the word *deserto* here placed within brackets has been misplaced by the carver of the inscription. Dr Duncan wrongly translated this inscription as follows :—"Jesus Christ the Judge of righteousness—Him assuredly to be the Saviour of the world, beast and dragons knew from thence."

scrolls, each representing a vine with its branches alternately recurved, and bearing grapes in symmetrical clusters, a bird or beast lodging in each of the branches and feeding on the fruit. The vine is the most ancient subject of Christian art. It appears in the Catacombs, treated with all the grace and freedom of classic naturalism both in painting and sculpture. The Byzantine formalism reduced it to a mere running scroll, and in this conventional form it always appears on the monuments of this country, sometimes with and sometimes without the adjunct of the birds and beasts lodging in the branches."

The Runic inscriptions which are incised on the raised borders surrounding the scroll work on the two sides of the Cross are in the older variety of alphabet known as the Anglo-Saxon, which consisted of upwards of forty letters, and in which seem to have been embraced, more nearly than in any modern alphabet, the actual sounds of a language.

"The inscription is arranged in vertical columns on either side of the panel of scroll work, extending from the top to the bottom of the narrow sides of the shaft of the Cross, with the exception of the first line, which runs horizontally across the top of the panel. Consequently it reads from left to right, across the first line in the usual way, then continues in a vertical line down the whole of the right hand border, returning to the top of the left hand border, and reading vertically again to the base. As the lower part of the Cross is more wasted than the upper, there are places where the reading fails towards the bottom of each border, thus making four gaps in the continuity of the inscription."

We come now to the story of the translation of the Runes, "which is in the highest degree interesting and instructive." The first who attempted to read the inscription was Mr Thorleif Gudmunsen Repp, a learned Icelander and sub-librarian of the Advocates' Library. He assumed the language to be a mixture of Icelandic and Anglo-Saxon, and translated accordingly. The value of his translation may be judged from the following. The lines which are now rendered—

> "Christ was on Rood,
> Whether there readily
> From afar there came
> The Prince to aid
> . . . . .
> Sore I was
> With sorrow troubled," &c.

were made by Mr Repp to mean that "a baptismal font with ornaments of eleven pounds weight was offered by authority of the Therfusian fathers for the devastation of the fields, and thirteen cows as an expiation for an injury." From other parts of the inscription he supplied the names of the devastated locality, "the dale of Ashlafr," a place that had no more historical existence than its holy conservators, the Therfusian fathers! The next scholar who attempted to unravel the inscription was the learned Professor Fin Magnusen, author of numerous works bearing on the language and literature of the Scandinavian peoples, but wholly unqualified to deal with an inscription of this kind in a language of which he was ignorant. Nevertheless he attempted it, and his paper may be found spread over 108 closely printed pages of the "Report addressed by the Royal Society of Northern Antiquaries to its British and American Members." He agreed with Mr Repp in regarding the language as a mixture of Icelandic and Anglo-Saxon, but differed *toto cælo* from him in his translation. He based his reading on a wonderful engraving which he designates the "Thorkelin Engraving," and which turns out to be nothing more than the plate engraved by the Scottish artist, Adam de Cardonnel, for the "Vetusta Monumenta," a work published by the Society of Antiquaries of London in 1789. The words "Cadmon me fœuotho," Prof. Magnusen transformed into "Offa, Voden's Kinsman," and gives us (p. 149 of Report) his genealogy "according to the younger Edda." His translation is as follows:—"I, Offa, Voden's kinsman, transfer to Eska's descendant, to you two the property, field, meadow give we Ashlof! The words of the noble I below make known. To Erinc young promised she riches, estates good, I for the marriage feast prepare in the meantime. 'Received he now,'—the noble spoke,—'the gift, and aye preside in the hall over the guests!' I have magnanimity, I bring rings (riches) . . . These three estates Erincred possesses. Christ was among———when to all we gave all that they owned—the married pair; At their home, the rich woman's, you were a guest, their down-dwelling — — Give every — — The advice is willing (*i.e.*, willingly given). Back spoliation, if yet living on earth! Well the Etheling possesses now me this property. Saw I us my Son! Every where again rule!" Matters were in this condition when in 1838 the attention of Mr J. M. Kemble, a distinguished Anglo-Saxon scholar, having been turned to its decipherment, the true meaning

of the inscription was ascertained. In a paper on "Anglo-Saxon Runes" (published in the "Archæologia," vol. xxviii.), Mr Kemble demonstrated that the language of the inscription was Anglo-Saxon, and its construction rhythmical. He showed that the inscription began with the words "Christ was on the Rood," and was a poetical description of the passion of the Saviour. Two or three years afterwards Mr Kemble had the pleasure of seeing the entire poem, consisting of 310 lines, in their southern English dress, on their being published from an old English manuscript at Vercelli, now known as the *Vercelli codex*. As a proof of the accuracy of his translation, it may be mentioned that after examining the South English copy he had only three words of his translation to correct. The *Vercelli codex* was discovered by a German, Dr Blume, in the library of the Convent at Vercelli, and was copied by Mr B. Thorpe, the eminent Anglo-Saxon scholar, who was sent out by the Record Commission for that purpose. The *codex* contains six poems, namely—1, "A Legend of St. Andrew;" 2, "The Fortunes of the Twelve Apostles;" 3, "The Departed Soul's Address to the Body;" 4, "A Fragment, Moral and Religious;" 5, "A Dream of the Holy Rood;" 6, "Elene, or the Invention of the Cross." The poems were printed under the editorship of Mr Thorpe, in a volume known as "Appendix to Mr Cooper's Report on Fœdera," Appendix B.

The poem represents the sleeping Christian suddenly awakened by the vision of the Cross, which appears in the sky guarded by angels, and manifesting, by various changes, its sympathy in the sufferings of the Redeemer. At length, being endowed with speech, the Cross itself addresses the sleeper in impassioned but dignified language, and describes its feelings on being made the instrument of the sufferings of the Son of God. It is from this beautiful part of the poem that the verses have been selected for inscription in Runes on the Ruthwell Cross.

THE RUNIC INSCRIPTION.

In the first column we have—

"On-geredæ hinæ
God Almeyottig,
tha he walde
on galgu gistiga,
modig fore
allæ men
bug. . . ."

" On-girded Him,
God Almighty,
When he would
On gallows mount,
Proud before
All men
Bow [durst not I]."

In the second column the cross itself speaks, and says—

" (Ahof) Ik riiknæ kyningk
heafunæs hlafard,
hælda ik ni darstæ,
bismærædu ungket men ba ætgadre
ik wæs mith blodæ bistemid
bigoten of. . . ."

" I upraised the mighty King,
Heaven's Lord,
Heel (over), I durst not,
Men reviled us both together.
I was with blood besmeared,
Poured from [the man's side]."

We turn now to the third column, on the other side of the monument, and there read—

" + Krist waes on rodi,
hwethræ ther fusæ
fearran kwomu
æththilæ til anum.
ik thæt al biheald
sare ik wæs mith sorgum gidræfid."

" Christ was on Rood,
Whither there readily,
(Men) came from afar
The Prince to aid—
I that all beheld,
Sore I was with sorrow troubled."

The fourth column gives—

" Mith strelum giwundæd,
alegdun hiæ hinæ limwærignæ
gistoddun him (æt) his likeas heafdum
bihealdun hiæ ther heafun. . . ."

" With missiles wounded,
Laid they him limb-weary—
They stood at his corpse's head,
Beheld they there Heaven ['s Lord]."

The lines here given will be found to be in close agreement with the dying words of Bede, the few English lines embedded in the Latin text, and also with the Northumbrian original of Cadmon's

hymn. In the Runes also the letter *k* occurs, which did not appear in southern English till two centuries later. The dual accusative *ungket* is extremely old, and occurs nowhere else. The *n* of the infinitive has been clipped, and the dialect is thus in close agreement with the old Norse and Frisic. In southern English the infinite ends in *an*. The *n* of the plural imperfect has also been clipped, and there is a curious softening of the guttural *h* (= *ch* in loch) in *ælmihtig*, which is here written *almeyottig*. The word *til* (to) is unknown in southern English, but occurs in the Northumbrian original of Cadmon's hymn and in the Northumbrian Gospels. For comparison with the lines above printed, we may here give the Northumbrian original of Cadmon's hymn along with King Alfred's West Saxon version. The Northumbrian is as follows :--

" Nu scylun hergan hefænricæs uard,
Metudæs mæcti end his modgidanc,
Uere uuldurfadur, sue he uundra gihuæs,
Eci dryctin, or astelidæ.
He ærist scop ælda barnum
Heben till hrofe, haleg scepen :
Tha middungeard moncynnæs uard,
Eci dryctin, æfter tiadæ
Firum, foldu, frea allmectig."

King Alfred's version is :—

" Nu we sculan herian heofonrices Weard,
Metodes mihte and his modgethouc,
Wera Wuldorfæder ; swa he wundra gehwæs,
Ece Dryhten, ord onstealde.
He ærest gesceop eorthan bearnum
Heofon to hrofe, halig Scyppend ;
Tha middangeard, monncynnes Weard,
Ece Dryhten, æfter teode
Firum foldan, Frea Ælmihtig."

Translation—

" Now shall we praise heaven-kingdom's warden,
The Creator's might and His mind's thought,
Of men the glorious father,—as He of every wonder,
He, the Lord Eternal, formed the beginning.
He first shaped for earth's bairns
Heaven as a roof, holy Creator (" shaper ") ;
Then mid-earth, mankind's Warden,
Eternal Lord, afterwards made,
The earth for men, Almighty Lord."

Wanley in his catalogue of Anglo-Saxon manuscripts placed the date of the manuscript containing Cadmon's hymn in the year

737, and this early date is confirmed by the handwriting and by the close agreement of the lines with Bede's Latin prose translation, which runs thus :—

"Nunc Laudare debemus auctorem regni coelestis, potentiam Creatoris et consilium illius, facta Patris gloriae. Quomodo ille, cum sit aeternus Dens, omnium miraculorum auctor exstitit, qui primo filiis hominun coelum pro culmine tecti, dehinc terram custos humani generis omnipotens creavit."

"CADMON ME FÆUOTHO."

I have already mentioned that the runes on the top stone have been interpreted "Cadmon me made," and on this point I think there can be no doubt. Now, we only know of one Cadmon, and we know him chiefly as a poet, and we are further told by the venerable Bede that this Cadmon composed poems on "The creation of the world and the origin of the human race, and the whole story of Genesis, of Israel's departure out of Egypt and entrance into the land of promise, of many other parts of the sacred history, of the Lord's Incarnation, *Passion*, Resurrection, and Ascension into heaven, of the coming of the Holy Spirit, and the doctrine of the Apostles," &c. Yet, notwithstanding all this, it is asserted by many scholars that the "Dream of the Rood" was not composed by Cadmon, but by another poet—Cynewulf. Thus Mr Sweet, in his "Anglo-Saxon Reader" (fourth ed., 1884), tells us that the poem was written by Cynewulf, on the strength of Cynewulf's name being introduced into another poem in the same manuscript *(Ver. cod.)*, in the form of an acrostic in Runic letters! He also informs us that "The Runic inscription of the Ruthwell Cross in Dumfriesshire also gives a fragment of the poem in the old Northumbrian dialect of the seventh or eighth century." On the other hand, Prof. Zupitza, in his "Alt und Mittelenglisches Uebungsbuch" (3d ed., Wien, 1884), gives us the Runes with the various readings, but ignores the top stone altogether, and yet he cites among his authorities the "Vetusta Monumenta" and Prof. Stephens' "Runic Monuments!" In conclusion, I cannot do better than quote the thoughtful words of Dr Anderson in his lecture on the Cross. He says—"This, then, is the story of the decipherment of the Runes on the Ruthwell Cross. I know nothing in the whole range of monumental history that surpasses it in interest. It makes us regard the monument not only as a finger-post in the history of Christian art, but as a landmark in the history of English literature. In its sculptured decorations it preserves to

us the style and quality of a very peculiar phase of early Christian art. In its associated inscriptions in the Latin language and character, it preserves to us the key which gives the explanations of other sculptured groups that have no associated inscriptions. In them also it preserves to us the very words of the texts of Scripture, of the passages from the Apocryphal gospels, and the legendary lives of the saints that were thus chosen for sculptured representation. Above all, in its Runic inscription it has preserved a fragment of one of the earliest known specimens of old English literature—a poem undoubtedly of very unusual merit. No literary monument graven on stone of such a character, or of greater importance in the history of literature, exists anywhere else. It is a monument of culture in the highest sense of the term. It is a monument unique of its kind, bearing witness to the existence of an artistic culture, which for its age was high, and of a literary culture which but few of the succeeding ages have greatly surpassed. It is, therefore, a monument of which the nation of whose history it forms a conspicuous part might well be proud."

8th January, 1886.

Mr J. G. H. Starke, Vice-President, in the Chair. Thirty-four members present.

New Members.—Dr Aitken, Inverness, and Miss Barbour, Belmont, Dumfries.

Dr Gilchrist's Death.—The Chairman intimated that since the Society had last met, their esteemed President, Dr Gilchrist, had been removed by death, and for this reason the special meeting was not held on the 18th December. He called upon Dr Grierson to move a resolution. Dr Grierson—as one who had known the late President for many years—in feeling terms moved "That this Society record in its minutes the great loss which it has sustained on the removal by death of Dr Gilchrist, and that it tenders to Mrs Gilchrist its deepest sympathy in her sore bereavement." This was seconded by the Chairman, who testified to the kindly manner and unvarying courtesy with which their late President was ever ready to assist the members, and to further the objects of the Society.

The Society's New Rooms.—The Secretary submitted a report

of the sub-committee (see Appendix) that had been appointed to make arrangements and carry out the operations in connection with the new rooms. On the motion of Mr J. Thomson, seconded by Mr Dods, the report was unanimously adopted, and the sub-committee were awarded a hearty vote of thanks for completing the undertaking so successfully, special thanks being given to Mr Barbour, Vice-President, and to Mr J. Wilson, Honorary Secretary. It was also unanimously agreed to award the Society's thanks to all the ladies and gentlemen who had contributed so liberally towards the expense.

Exhibits.—Dr Grierson exhibited a Japanese magic mirror, a black snake from South Africa, the nest of the trap-door spider, and several Indian curiosities.

Election of President.—The Chairman intimated that the committee had resolved to recommend Dr Grierson to be their President in succession to the late Dr Gilchrist, and he moved accordingly. This motion was seconded, and unanimously agreed to. Dr Grierson, in accepting office, remarked that the first meeting of the old Society consisted of Dr Gilchrist, Dr Dickson, Mr W. G. Gibson, and himself, and that as the present Society numbered over 200 members, he was much gratified by the honour conferred upon him.

Communications.

I. *Galloway Place Names.* By Mr J. M'Kie.

To the greater number of us many of these names convey no intelligent meaning whatever, yet we may be assured that whether they belong to parishes or farms, hills or valleys, lakes or rivers, they are never mere arbitrary sounds devoid of meaning. Though many of them may have become so obscured by the mists of antiquity, and their passage through several languages as to make them but indistinctly visible, yet they ought always to be regarded as records of the past, inviting and rewarding a careful historical research, for they often record events which history has failed to commemorate, and embalm for us the guise and fashion of speech in eras the most remote, and of language that may have long ceased to be vernacular. We owe a debt of gratitude to our semi-barbarous ancestors for the varied and beautifully descriptive names they gave to all the prominent features of the land. The Gaelic place-names in Galloway were word pictures of the country, as it appeared when first beheld by the original settlers.

In marked contrast to this is the poverty of inventive faculty evinced by the earlier settlers in America, who were not savages but civilised men, yet a large proportion of the names given by them to places are thoroughly barbarous in character, and for the most part utterly inappropriate, and accomplish very insufficiently the purpose which names are intended to fulfil. Such names as Salem, Bethel, Athens, Troy, Rome, London, Paris, Corinth, and the like, are scattered broadcast throughout the length and breadth of the land, and by their endless repetitions must be a source of great perplexity in the post-office, booking office, and schoolroom. Much may be said in favour of the names whereby the Colonists have striven to reproduce in a land of exile, the names of the beloved spots which they had left. I was much struck with this, when a few years ago I passed through that part of Canada lying between the lakes Huron and Erie, and generally known as the Huron tract. The Colonists of that district being chiefly from the South of Scotland, the familiar Galloway names were everywhere to be met with, and though many of them were inappropriate in such a level country, yet on account of their being given in memory of the old homesteads they were excusable. Not so, however, the intolerable presumption displayed by those who have ruthlessly seized upon the grand historic names of the old world, and applied them by the score to a limited number of wooden houses, a sawmill, grocery, and grog stores, which go far to make up a city in a Western forest. But from this digression to return to Galloway. A very important point in ascertaining the meaning of topographical words is to discover their ancient spelling. As the greater number of these had been spoken for ages before they were written, and when they came to be written the manner of spelling would in a great measure depend on the accent of the speaker and the ear of the writer, which accounts for the diversity that often appears in spelling the same word, though it may be nearly at the same date. I have now before me the Valuation Roll of the Stewartry of Kirkcudbright, retoured to Exchequer, 15th July, 1642. The spelling used in it makes plain the meaning of many words which modern spelling has almost completely obscured. Words being like coins, they get clipped and worn by constant use, until the legend which they bore at first becomes almost effaced. The several races who at different times held sway in Galloway, namely, the Caledonian

Gael, the Romans, the Teuton or ancient Saxon with a sprinkling of Norse, the Irish Celt, and the Anglo-Saxon, have each left some record of their history in the names they gave to the sites and surroundings where they had found a home. Whenever we attempt to make an analysis of local names we find that by far the greater number contain two component elements, one of these which in Gaelic names is generally the *prefix*, and in Teutonic names the *suffix*, in some general term meaning island, river, mountain, dwelling, or inclosure, as the case may be. The following are the Gaelic prefixes, with their English corruptions and significations, which occur most frequently throughout Galloway :—

English Corruptions.	*Gaelic Prefixes.*	*English Significations.*
Ach, Auch, Achen, Auchen, Auchin	Achadh, often contracted to Ach and Acha	A field
Dal	Dail	A field
May, Mach, Meath	Magh, Machair	A plain, a field
Aird, Ard	Aird, Airde, Ard	Height, lofty, elevation
Bal, Bel	Baile	A town, farm, hamlet, or home
Bar, Barra	Barr	A point, an extremity
Ben	Beinn	A mountain
Carn, Cairn	Carn	A mountain, also a monumental heap of stones
Blair	Blar	A battle, a battlefield, also a plain
Car, Com, Crum	Cam, Car, Crom	A bend, crooked, curved
Cory, Corrie, Cors	Coire	A ravine, a deep hollow
Coul, Cull	Cul	The back, a back-lying place
Craig, Craigie	Creag, Craigie, Creageach	A rock, a rocky place
Drum, Drym, Drem	Druim	A ridge
Doun, Doon, Dum	Dun	A castle, a fort, a mound
Larg	Learg	The side of a hill, the slope of a hill, rising ground
Garv, Gar, Garron	Garhh	Rough, roughness
Glen	Gleann	A small valley
Strath	Srath	A larger valley
Kil, Killy, Kelly, Killie	Coille	A wood
Knock	Cnoc	A knoll
Loch, Lochen	Loch, Lochan	A lake, a small lake
Lag, Logan	Lag, Lagan	A hollow, a small hollow
Mon	Monadh	A hill
Tor	Torr	A conical hill
Pol	Poll	A pool, a marsh
Rie, Arie	Ruighe, Airidh	A shealing, place of summer pasture

The first to be noticed is the English corruptions of the Gaelic

Acha or *Achadh*, a field, the most common being *Auch*. There are over thirty places with this name in the Stewartry. These being often in groups make known to us where the cultivated lands of the Gael were situated, and where they have made most progress in agriculture, and thereby in civilisation. Time will only admit of a limited number in each case being given as examples:—*Auchenlairie* is from the Gaelic words, *Achadh-na-hiolarie*, and signifies, the field of the eagle, proving that eagles then frequented the adjoining cliffs; *Auchenreoch*, from *Achadh-riabhach*, meaning the grey-looking field; *Auchencloy*, from *Achadh-na-cloiche*, the field of the stone; *Auchlane*, from *Achadh-liana*, the field of the plain; *Auchengibbert*, from *Achadh-na-t-iobairt*, the field of sacrifice. This name is so clearly of heathen origin that it proves its great antiquity. The prefix *Dal*, which is from the Gaelic *Dail*, means also a field, but is not so common as the former word; *Dalquhairn*, from *Dail-a-chairn*, the field of the cairn; *Dalry*, from *Dail-righ*, the king's field; it implies also sometimes that the field is level, *Dail-reidh* meaning the level or smooth field; *Dalbeattie*, from *Dail-beithe*, the birch-tree field. The birch among the ancient Gael was used as an emblem of readiness to do a kindness. A young maiden presented her lover with a twig of birch as a sign of her acceptance of him. The Gaelic words, *Magh* and *Machair*, both signify a plain, and sometimes a field; *Machermore*, from *Machair-mor*, the great plain; *Balmae*, from *Baile-magh*, the hamlet or home of the plain; *Tannymaas*, from *Teine-magh*, the fire field. This name is evidently of heathen origin, referring to where fires had been specially lighted to the pagan god, Bel. The next in order of the prefixes is that of *Aird*, *Airde*, or *Ard*, signifying height, high, lofty; *Ardoch*, from *Ardach*, meaning the high field; *Lairdmannoch*, evidently a corruption of *Ard-mheadhonach*, the middle height, which very aptly describes its position; *Airdrie*, from *Airde-reidh*, the smooth height, or else from *Airde-righ*, the king's height; *Bal* and *Bel*, from the Gaelic *Baile*, means not only a town or village, but also a farm, home, or dwelling; *Balgerran* comes from *Baile-gearr-an*, which means the town on the short stream; *Balcary*, from *Baile-na-carragh*, the house of or at the pointed rocks; *Balmaclellan* and *Balmaghie*, the town or dwelling-place of the M'Lellans and M'Ghies; *Bar* and *Barra*, from the Gaelic *Barr*, meaning a point, extremity, or upper part, occurs very frequently. There being more

than sixty places with this name in Galloway, it is occasionally used singly, and in its Gaelic spelling when it simply signifies uplands, but mostly as a prefix. *Bargally*, from *Barr-geal*, the white or fair point; *Bardarroch*, from *Barr-darach*, the oak wood point; *Barcaple*, from *Barr-capull*, the horses (mares) point on uplands; *Barlochan*, from *Barr-lochan*, the little lake at the point; *Ben*, the English corruption of the Gaelic *Beinn*, a mountain; *Bengairn*, from *Beinn-a-chairn*, the mountain of the cairn; *Bennan*, from *Beinn-a-nan*, the mountain of the river, which graphically describes its situation as it rises from the margin of the Ken; *Benbrock*, from *Beinn-bhroc*, the badgers' mountain; *Cairn*, from the Gaelic *Carn*, also means a mountain, and sometimes a monumental heap of stones; like *Bar*, it is sometimes used singly, but generally as a prefix; *Cairnsmuir*, from *Carn-mor*, the great cairn; *Cairnleys*, from *Carn-liath*, the grey cairn; *Blair*, from the Gaelic *Blar*, a battle, a battlefield, also a plain; *Blairinne*, from *Blar-inne*, the battle or battlefield at the water channel or river; *Blairshinnoch*, from *Blar-sionnaigh*, this may mean either the battle of the foxes, from the cunning displayed by the combatants, or the plain of the foxes; *Blairbuies*, from *Blar-buidhe*, the yellow battlefield or plain. *Car*, from the Gaelic *Cam*, *Car*, *Crom*, a bend, curved, crooked; *Carlae*, from *Car-liath*, the grey bend; *Carsmaddie*, from *Car-madadh*, the wolf's bend; *Cargen*, from *Car-eanach*, the curved or winding water. The English words *Corry*, *Corrie*, and *Currie*, all of which are from the Gaelic *Coire*, meaning a ravine or deep hollow, are frequently met with. *Corriedow*, from *Coire-dubh*, the black ravine; *Corriefeckloch*, from *Coire-fitheach-loch*, the ravens' ravine of or at the lake; *Kirriereoch*, evidently from *Coire-riabhach*, the grey looking ravine. *Coul* and *Cull*, from the Gaelic *Cul*, meaning the back or back-lying place, are of common occurrence; *Culdoch*, from *Cul-du-oich*, which means the back-lying place of the dark water, which fully describes its position in connection with the dark water of the Dee; *Culreoch*, from *Cul-ribahach*, the back-lying grey looking places. *Craig* and *Craige*, from the Gaelic *Creag*, *Craigie*, *Creagach*, meaning a rock, a rocky place, occur very frequently. It occasionally appears singly as *Craig*, but generally as a prefix. *Craigdarroch*, from *Creag-daraich*, the rock of the oak wood; *Craigshinny*, from *Creag-sionnaigh*, the foxes' rock; *Craigdew*, from *Creag-dubh*, the black rock. *Drum*, from the Gaelic *Druim*, a ridge, is also of frequent occurrence;

Drummore, from *Druim-mor*, the great ridge; *Drumboy*, from *Druim-buidhe*, the yellow or aburn ridge; *Drumbeg*, from *Druim-beag*, the little ridge. *Doon*, *Dun*, *Doune*, all corruptions of the Gaelic *Dun*, which means a castle, a fort, a mound, or earthwork. It appears in several places singly as *Doon*, and *Douns*, but chiefly as a prefix. *Dunjarg*, from *Dun-dearg*, the red fort; *Dundrennan*, from *Dun-nan-droigheann*, the fort of the thorn bushes; *Dunmuck*, from *Dun-muic*, the fort of the wild sow. *Larg*, from the Gaelic *Learg*, meaning a hill side, the slope of a hill, rising ground. This is often used singly as *Larg* and *Largs*, but also as a prefix; *Largmore*, from *Learg-mor*, the great slope or rising ground; *Largnean*, from *Learg-nan-eun*, the hill side of the birds, or abounding in birds; *Larglanglee*, from *Learg-lan-liath*, the home or cultivated spot on the slopes of the grey hill. *Gar*, *Gart*, *Garrow*, corruptions of the Gaelic *Garbh*, meaning rough or roughness, appears pretty often; *Garroch*, from *Garbh-ach*, the rough field; *Garlog*, from *Garbh-lag*, the rough hollow; *Garcrogo*, from *Garbh-creagach*, the rough, rocky place. The next prefix is the very common one of *Glen*, from the Gaelic word *Glean*, which signifies a small valley; *Glenshinnoch*, from *Glean-sionnaigh*, the valley of the foxes; *Glenkil*, from *Glean-coille*, the wooded valley. It is also met with singly as *Glen* or the *Glen*. *Strath*, from the Gaelic *Srath*, means a more extensive valley than the word *Glen*, and thereby of course not near so frequent; *Strathmanna*, from *Srath-eannagh*, the valley of the marsh; *Strathmaddie*, from *Srath-madaidh*, the valley of the wolf. The next prefix is in English, *Kill*, *Killie*, and *Killy*, which are all derived from the Gaelic *Coille*, signifying a wood, a forest; *Killdow*, from *Coille-dubh*, the black wood; *Killimore*, from *Coille-mor*, the great forest; *Killigowan*, from *Coille-ghobhainn*, the blacksmith's wood; very probably because it was from where he obtained the fuel for his forge, the blacksmith being, of course, a very important personage in the remote ages, particularly in making the swords, dirks, &c., with which the Romans under Agricola, in the first century, found the Galwegians fully provided. *Knock*, from the Gaelic *Cnoc*, meaning a knoll or small hill, is very common; *Knockengarroch*, from *Cnoc-na-garbh*, the knoll of roughness; *Knockmulloch*, from *Cnoc-mulloch*, the knoll's summit; *Knocklea*, from *Cnoc-liath*, the grey knoll. *Loch* and *Lochan*, which means a lake and a small lake, are very frequent; *Lochenbreck*, from *Lochan-breac*, the

small speckled lake, probably from its abounding in trout; *Loch-fergus*, from *Loch-Feargus*, or Fergus' lake; *Lochdow*, from *Loch-dubh*, the black lake. *Lag* and *Lagan*, which signify a hollow, and a small hollow, are also general, often singly, and occasionally as a prefix; *Laganorry*, from *Lagan-airidh*, the hollow of the shealing; *Laggan-Mullan*, from *Lagan-mhuillin*, the hollow of the mill. *Mon* is an English contraction of the Gaelic *Monadh*, which means a hill; *Minniedow*, from *Monadh-dubh*, the black hill; *Minnibuie*, from *Monadh-buidhe*, the yellow or auburn hill; *Muncraig*, from *Monadh-creag*, the rocky hill. *Torr*, which means a conical hill, is used singly as *Tor*, and *Torrs*, and as a prefix—*Tormanie*, from *Torr-na-monaidh*, the conical hill of the mountain; *Torrorie*, from *Torr-airidh*, the conical hill of the shealing. The next on the list is the prefix *Pol*, from the Gaelic *Poll*, which means a pool; *Pulcree*, from *Poll-crioch*, the boundary pool; *Polmadie*, from *Poll-madaidh*, the wolf's pool; *Polvaddock*, from *Poll-feadog*, the plover's pool. The English words *Rie* and *Arie* are from the Gaelic words *Ruighe* and *Aridh*, signify a shealing, that is, the place of the summer pasture, also a dwelling at these during the summer season; *Benaire*, from *Beinn-airidh*, the shealing of the mountain; *Clauchrie*, from *Cloiche-ruigh*, the stony summer pasture; *Largirie*, from *Learg-airidh*, the summer pastures of the hill-side. Having thus given local examples of the above Gaelic prefixes, we will now turn to the Saxon suffixes, where it will be found that those which occur most frequently denote an enclosure of some kind, something hedged, walled in, or protected, which prove how intensely the Saxon race was imbued with the principles of the sacred nature of property, and how eager every man was to possess some spot he could call his own, and guard from the intrusion of every other man. Those universally recurring terminations, *ton*, *ham*, *hay*, *burgh*, *yard*, *garth*, *park*, *croft*, and *field*, all convey the notion of inclosure, or protection, of which the following are local examples:—Chapleton, Edingham, Auchenhay, Dryburgh, Clonyard, Fairgirty, Gledpark, Coopercroft, and Broadfield. There are over fifty places in the Stewartry having the suffix *ton*, which signifies a place surrounded by a hedge, or rudely fortified by a palisade. It becomes like the Gaelic *Ach*, a sort of test word, by which we are able to trace the localities where the Saxon intruders first settled among a hostile and alien race. Those places called Garleton and Borland

take their names from two classes of society among the Saxons—the former from the *ceorles* or middle class, and the latter from the *boors* or lowest class, the *thanes* being the highest. The suffixes, *bery* and *law*, mean respectively a hill, and a rising ground, examples Greenlaw, and Raeberry. *Den* and *shaw*, a wooded valley, and a wooded hill, or height, Clouden and Clatteringshaws. This latter may be taken as an instance where the meaning is greatly obscured by modern spelling. In the Valuation Roll of 1642 it is spelled Catteringshaws, which means the wooded point of the hill frequented by the wild cat. That wild cats abounded in this locality is evident from the neighbouring lands formerly being called Catbellie, wild cats being common in Galloway until after the beginning of the present century; but since they no longer prowl in that neighbourhood, or yet the wolf in *Strathmaddie*, and the badger having ceased to make his hole in *Benbrock*, the scream of the eagle being no longer heard at *Auchenlairie*, and the wild sow having deserted *Dunmuck*, the roebuck having fled from *Raeberry*, and the fox from *Knockshinny*, these together with the ceorles and boors would alike be forgotten were it not that their memory lives through their names being given to the places which they had inhabited. In concluding these remarks, I would submit that the Antiquarian Section of the Association might find congenial work in rescuing from obscurity these beautifully descriptive, yet fast waning place-names. The Natural History Section might also be induced to assist, as it would add to the interest of any floral or other specimen they picked up, if, while noting the name of the locality, they were likewise able to record how it had obtained that name.

5th February, 1886.

Dr Grierson, President, in the Chair. Forty-three members present.

New Members.—Dr Hunter Dryden, Dumfries; Dr Robertson, Penpont; Mr Robson, Penpont; Messrs J. Cumming, M. M'Innes, and T. C. M'Kettrick, Dumfries.

Donations.—Mr W. J. Maxwell presented on behalf of Captain Maxwell of Terregles five rare birds from New Zealand, including the ground parrot, *Stringops habroptilus;* four local birds—two

owls, a kestrel, and a golden-eye ; a stoat ; and also "A History of the Birds of New Zealand," by W. L. Buller. Major Bowden presented eleven volumes of the Philosophical Journal. The Secretary laid on the table the Transactions of the Berwickshire Naturalists' Field Club ; the Second Annual Report of the U. S. Geological Survey, as a donation from the Smithsonian Institution ; and called the attention of the meeting to the handsome clock which had been placed in the rooms as a donation from Mr J. C. M'Lean.

Exhibits.—The Chairman exhibited a gold coin found near Thornhill, of the reign of Robert II. Mr Wallace exhibited the small tortoise-shell butterfly, and remarked that he had found half a dozen of the species at Terreglestown during the past week.

Communications.

I. *Some Practical Suggestions.* By Mr J. G. H. Starke, Vice-President.

An interesting discussion followed the reading of this paper.

II. *At Aberdeen with the British Association.* By Mr J. Shaw.

Mr Shaw, in this paper, described the various interesting places visited by the Association, and briefly noticed some of the important scientific papers that were read at the conference.

III. *A Gossip about Lichens.* By Mr P. Gray.

In this paper, which was illustrated by a number of specimens, the author referred to the successful investigations made by Mr M'Andrew in Galloway, and regretted that so little was known of the Lichens of Dumfriesshire. He suggested that the members should collect as many of these as possible, and forward them to Mr M'Andrew or some other authority for identification, for by so doing they would not only make themselves acquainted with these interesting plants, but further the advancement of science. Mr Gray next described the Lichens, their place in nature, their habitats, their impatience of atmospheric and other impurities, and remarked that their luxuriance was one of the tests of the healthiness of a climate. He recommended that the collectors should examine all the stone-dykes, and visit the Lochar Moss, and the woods of Dalscone, Carlaverock, and Kirkmichael. The collector of Lichens should carry a strong sharp

clasp knife, to detach those growing on trees, &c., a geological hammer and well tempered chisel to split off pieces of rocks. The specimens should be wrapped in soft paper, labelled with locality and date, and might be carried home in a satchel. He gave instructions for the drying and examination, and recommended Lindsay's Popular History of Lichens as a useful book to beginners.

5th March, 1886.

Dr Grierson presiding. Twenty-six members present.

Deceased Member.—On the motion of the Secretary, it was agreed to record the loss sustained by the death of Mr W. Adamson, who had taken an active part in the Society since its foundation, and who had for several years acted as Honorary Treasurer.

New Members.—Dr J. Callander, Dunscore, and Mr J. M'Veigh, Dumfries.

Donations.—The Secretary laid on the table thirteen parts of the Linnean Society's Proceedings, as a donation from W. D. Robinson-Douglas, Esq.; the Annual Report of the Bureau of Ethnology 1882-83, from the Smithsonian Institution. Mr S. Chrystie presented a collection of birds' eggs from the district.

Exhibits.—The Chairman exhibited a bronze spear-head found at Bowhouse, Carlaverock, and an old engraving of "The Pillars," a shop which stood in the corner of Bank Street and High Street. Mr Starke exhibited a number of engravings of Sir Walter Scott, some of which he remarked were very rare.

Communications.

I. *A Stoic Philosopher's View of the Deity.* By Rector Chinnock.

The author gave an interesting account of the old Stoic school of philosophers, and submitted a *resumé* of the teachings of Epictetus in reference to the Deity.

II. *An Hour with the Old Scottish Balladists.*
By Mr W. M'Dowall.

2nd April, 1886.

Dr Grierson presiding. Thirty-eight members present.

New Member.—Miss Thomson, Rosemount Terrace, Maxwelltown.

Donations.—The Secretary laid on the table the Third Annual Report of the United States Geological Survey, four parts of the Transactions of the New York Academy of Science, as donations from the Smithsonian Institution; three volumes of Transactions of the Lancashire and Cheshire Historic Society, forty-one parts of Greviella, an engraving of old Dumfries, an engraving of Dumfries about 50 years ago, three sheets of the Ordnance Survey Maps of the district, several specimens of local rocks and minerals, fragments of Roman pottery found at Carlisle, an old spur found under the foundations of the New Church, Dumfries, and a box containing specimens of lead in various stages of manufacture, as donations from Mrs Gilchrist. Mr Coles, Vice-President, presented 110 specimens of flowering plants, and, on behalf of Mr Arthur Bennett, a collection of dried plants for distribution to the members. Mr P. Stobie presented a guinea note, dated at Dumfries, 2d April, 1804.

Bust of late President.—The Chairman unveiled a bust of the late Dr Gilchrist, which had been placed on a bracket in the larger hall, under the Committee's instructions, by the artist, Mr J. W. Dods, and he laid thereon a beautiful wreath of spring flowers, remarking that these were the flowers Dr Gilchrist so much prized.

Summer Programme.—The Secretary submitted the following list of places selected by the Committee for the Field Meetings: —May—Kirkconnell woods and the sea-shore to New Abbey; June—Kirtlebridge; July—Morton Castle, Gatelawbridge Quarries, and Crichope Linn; August—Shieldhill to Lochmaben; September—Annan and district.

The Chairman intimated that he had received a proposal for a joint-excursion from the Secretary of the Scottish Natural History Club, Edinburgh. The Committee's list was agreed to, and the Committee were empowered to alter any of the preceding to meet the convenience of the Edinburgh Society, and to take part in the joint excursion.

Communications.

I. *Botanical Field Notes for* 1885. By Mr J. Fingland.

In responding to an invitation of our Secretary to give a communication to the Society this session, it has occurred to me to offer you a resumé of a few botanical notes which were made by me during last summer. The Thornhill district of Upper Nithsdale may now be regarded as having been fairly well surveyed in regard to the general run of flowering plants, as I think the last paper from the district given by Dr A. Davidson will testify. With the exception of one or two of the more critical families of plants, any records now to come from the district must be regarded in the nature of gleanings.

The discovery of *Nitella translucens* here in 1884 induced me to make a special search for these hitherto neglected plants. With this object in view, a number of the ponds and lochs which were accessible were therefore visited by me, but in the majority of cases the value of my examinations was entirely of a negative kind. In a few others, however, I was more successful, and a second station falls to be added for this *Nitella translucens*. Morton and Closeburn are now known both to possess it. The *capillacea* variety of *Chara fragilis* occurs in Closeburn, and there remains only another species to be reported, *Nitella opaca*, which is also found in the same parish. These results, although small, might be considered encouraging, but I do not anticipate a large find in these plants, considering the limited area of loch surface which there is in the district. As there is only one species of *Characeæ* as yet recorded from Sanquhar, one would infer that they increase in a southerly direction as affecting Upper Nithsdale. Potamogetons and other acquatic plants naturally came in for a share of attention in these searches. From the cause already mentioned, which also affects the distribution of Charas, the district is not rich in Potamogetons either. I think we cannot count more than six, and one of these is a sub-species. *P. obtusifolius* seems to be more common with us than *P. crispus*. In Carices, *ampullacea* seldom misses an opportunity of appearing in any situation which might sustain it. *C. vesicaria* is not so common, and evidently prefers the western side of the valley, a preference not peculiar to it alone, but which is characteristic of some other plants. *C. disticha* has this last year been gathered on a piece of waste marsh by the Nith. Only one patch of it

has been observed. At an immature stage this Carex was thought to exhibit more the habit of *C. arenaria*, and it became therefore desirable for its thorough identification to procure specimens in a state of maturity. Progress was reported by an occasional visit; but when at last I went to secure the coveted specimens I found the scythe of the mower had passed over the place—perhaps had taken a wider sweep, impelled by the harder times—and in place of these Carices now being placed on the table for your inspection, they went to swell the crop of meadow hay. I hope to have better luck with it this coming season. *C. limosa* is a valuable addition to our local Carices. I gathered it in Glencairn in a situation which has every appearance of being a permanent locality for this rather rare Carex. A form of *Carex fulva*, gathered in the vicinity of Moniaive, which I passed on to our eminent referee, Mr Bennett of Croydon, was considered by him to be the *sterilis* variety of Syme, and which he thinks is either the same or nearly the same as *Xanthocarpa*. Perhaps the most interesting find, and which also occurs in Glencairn, is a second station in the county for the so-called *Nuphar intermedia*. It seems to very closely resemble the Sanquhar plant, and indeed is probably identically the same, as the circumstances in both cases are similar. In both places apparently they are the only form of Nuphar present, and in addition, the localities occur at about the same altitude, and both are in the peat formation. I submitted specimens to Mr Bennett, who believed them to be *Nuphar lutea*, var. *minor*, of the third edition of English Botany, but was not certain whether they were the *N. intermedia* of Ledebun, which he said was considered a hybrid between *N. pumila* and *N. lutea*. Mr Bennett wrote me later on that the Nuphars were by no means settled, that the descriptions did not fit some of the supposed *N. pumila* plants of Perth, Aberdeen, &c. He further expressed the opinion that it was only by collecting material and submitting it to Dr Caspay, who is the authority on the genus, that he could hope to see our species and varieties properly arranged. It certainly looks a unique occurrence to have two stations in the county so distinctly apart for this plant, when the nearest places it is recorded from are in East Fife and Northumberland. The only other new plants to record for the district are *Rhyncospora alba* and *Juncus supinus*, variety *fluitans*, the former from an upland moor in Closeburn and the latter from near Penpont.

In the beginning of last August I had a short tricycle run through the south of the county, which afforded me an opportunity of extending my knowledge of our flora, and also of obtaining some specimens for my herbarium. I will mention only the less common plants which came under notice. I am well aware the majority, if not all of them, will be known to Dumfries botanists, although one or two of them do not seem to have been hitherto recorded. On the shore below Glencaple very little search sufficed to reveal the delicate flowers of *Anagallis tenella*, half hidden in the wet and spongy parts of the turf, whilst close beside were the pearl-like blossoms of *Sagina nodosa*. *Œnanthe Lachenalii* was there the characteristic umbellifer. *Blysmus rufus* struggled for possession of the drier parts of the ground with considerable success. Nowhere on the shore did I notice it so abundant as there. On reaching the ruins of Carlaverock Castle, I think the most striking feature, botanically speaking, is to be seen in the moat, where the tall and handsome grass, *Glyceria aquatica*, forms the greater portion of vegetation in the outer edge of the water. The adjoining marsh was quite gay with the bright colours of *Genista tinctoria* and *Betonica officinalis*. *Carum verticillatum*, liberally intermingled, gave an air of refinement to a rather beautiful group of plants. *Carex paludosa* is tolerably plentiful here and *Œnanthe fistulosa* likewise. Further round the shore the littoral species increase, and seem fairly well represented. *Carex extensa* is common on the shore about Ruthwell, and here also I found *Carex vulpina* growing in isolated tufts by the edges of ditches or drains, which intersect the merse. Bentham remarks of this Carex that where it occurs in Scotland, it is chiefly a coast plant. I have an immature Carex taken from Lochar Moss at Racks Station a year previous, which, after comparing with this, I take to be the same species. *Salicornia herbacea* is found in the tidal portions of the shore here. A little more inland I gathered *Valerianella olitoria*, *Drosera intermedia*, and *Lycopus europœus*. In a pond close at hand were *Potamogeton crispus* and one of the *Batrachian Ranunculi*, *R. floribundus*. Another of these, *R. peltatus*, I also found in a ditch with *Sparganium simplex* and *Veronica Anagallis*. The latter plant I mention only because, although a widely distributed one, I have never seen in Upper Nithsdale, having gathered it, however, in Moffatdale. *Anchusa arvensis*, as a weed in a corn field, was gathered near the shore at Ladyhall. Any further notes were

entirely from roadside observation, which I think are to be not despised. In some highly cultivated districts the roadside may form about the only refuge for hard pressed species. *Corydalis claviculata* is not very frequently met with, but may be seen from the road between Clarencefield and Brow Well on the edge of a wood. *Galium cruciatum* bulks largely as a roadside species about Clarencefield and further south. It is scarcer in the north of the county; but probably the Sanquhar district is the only one where it is absent. *Galium Mollugo* puts in an appearance near Clarencefield, and increases in some parts of the road, especially between Dornock and Gretna. It formed a striking feature, climbing and overtopping the hedges on the wayside with its large panicles of numerous white flowers, fully expanded at that time. Some specimens grew so luxuriantly as to measure between five and six feet in length. Another plant met more frequently in passing southwards was *Poterium Sanguisorba*. Near Cummertrees *Orobanche major* was gathered, and also *Filago germanica*, which I am not sure whether to regard as native or not. In passing out of the county towards Longtown a fine display of the handsome and showy flowers of *Scabiosa arvensis* was met with, accompanied with *Daucas carota*. Near Canonbie *Impatiens Noli-me-tangere* looked like a thriving escape. Close to the town of Langholm *Vicia sylvatica* and *Carex sylvatica* could be gathered plentifully from the road. My intention was to have made some examination of Eskdale in the interest of the botanical section of our Natural History Society, but stormy and wet weather here intervened and completely stopped any field work. My leisure time being limited, I had to abandon my intentions, and leave it perhaps to some other member of this Society to provide us with records from that district.

II. *Recent Additions to the British Flora.*

By Mr Arthur Bennett, F.L.S.

I have taken the Seventh Edition of the London Catalogue of British Plants as my starting point, and will briefly notice some of the plants which have been recorded since its publication. Probably at no era in British Botany have so many new plants been recorded. A prediction made somewhere about 1850, in a critique of one of the later editions of Hooker's and Arnott's "Flora," proves how little such results were then thought of. The Reviewer says—"Probably few, if any, real additions remain

to be made to our Flora, so well searched a country as Britain scarcely exists, &c." How many have been made since this date? I have not thought it worth while to look up. For myself, I venture to think that even now there are many such still to be found; doubtless they will mainly occur among the less conspicuous genera—as the Carices, Junci, Aquatics, &c.—as the results I now venture to bring before you will show. There is one genus I have taken no notice of, that is, Rubus. In the present state of our knowledge of the Rubi, it is a difficult matter to say which are new; our plants have yet to be correlated with the German and French forms; for the German, Mr J. G. Baker, of Kew, is now publishing some notes in the "Journal of Botany." With regard to Scottish Botany, I quite believe that the fact of our Flora having been specially studied in relation to the Germanic and French Floras, has led to less work being done, than would have been, had its Flora been studied in connection with that of Scandinavia. The Flora of Scandinavia has been called "an aggressive Flora," and certainly up to this date the distribution of Arctic species upholds this view. In Lapland and Finmark you have an Arctic Flora richer than all other Arctic Floras put together. But geographical distribution, though a tempting subject, must be passed over. I propose to simply note the species which have been known longest, and give more detailed notes on the more recent.

Ranunculus ophioglossifolius.—Found by Messrs Groves in Hampshire. It has been extinct some years in the Jersey locality.

Ononis repens, L., var. *horrida* (Lange).—For some time before 1883 I was convinced that the *Ononis* of the Norfolk sand hills differed from our recognised forms, but I failed to identify it, until I came across the description of *horrida* in Wilkhomm and Lange's "Prodromus Floræ Hispanicæ," which seemed to fit it well, and Professor Lange confirmed on my sending him specimens. It occurs also in Suffolk. The typical form also occurs in Cornwall and elsewhere. It is one of the old plants of Ray that had fallen out of notice.

Hieracium Norvegicum (Fries).—Found only last year (1885) by my friend Mr F. J. Hanbury on the north coast of Caithness. Other specimens gathered by Mr Hanbury in Caithness are considered near *H. oreodes F.* by Mr Baker, but by Dr Almquist as rather to represent a form of *Norvegicum.*

Hieracium saxifragum (Fries).—Grey Mare's Tail, Dumfriesshire, collected by J. Backhouse, I think, about 1850 or 1851. Mr Backhouse sent this specimen to my friend Mr Hanbury, and we took it to Kew on Saturday (27th March, 1886), and compared it with Fries' Herbarium Normale specimens, and with the specimens from Lindenberg and Scandinavia, and there is no doubt Mr Backhouse was right in supposing his specimen was *H. saxifragum*. It is most like some forms of *vulgatum*, but the leaves have the teeth beyond the general outline, and the hairs on the underneath are seated on small tubercules.

Sparganium neglectum (Beeby).—Three years ago my friend Mr Beeby called my attention to some specimens of Sparganium he had collected in Surrey, and which he could not make agree with either *simplex* or *ramosum*. Steadily pursuing his enquiries and collecting the plant in all stages of its growth, he felt bound to consider that at least it was a new sub-species. He has since published it under the above name in the "Journal of Botany." His opinion is concurred in by Dr Lange of Copenhagen, Dr Moir of Pisa, Dr Gray of Cambridge U.S.A., and by Mr J. G. Baker, Rev. Mr Newbould, &c., in this country. I think it says much for the botanical acumen of Mr Beeby, especially occurring in a county so well worked as Surrey has been supposed to be.

Potamogeton pusillus, L., sub-spec., *Sturrochii* (A. Bennett).—A very beautiful sub-species of *pusillus* found by Mr A. Sturroch in East Perth, which I was unable to match in my extensive collection of *pusillus* from any part of the world, in that at Kew or the British Museum, and my correspondents in Sweden and the United States (Dr Tiselius and the Rev. T. Morong, both specialists in the genus) both concur in considering it separable from *pusillus;* so I named it after the finder, who has done so much good work among the Perthshire aquatics.

Naias marina, L.—Found by my daughter at the entrance to Hickling Broad, in Norfolk, a beautiful sheet of water of about 500 acres. We were studying the aquatic vegetation, I myself looking over the masses pulled up by the "drag" she was using, and the first sight of it was her asking, "What is this?" I saw at once it was a Naias new to Britain. We afterwards found it scattered for over a mile of water, and last year (1885) my friend Mr Mennell found it in Somerton Broad. It occurs in Scandinavia, Holland, Belgium, France, Germany, and other parts of Europe. It is an interesting addition, adding as it does another link to the flora of Western Europe and East Anglia.

Naias graminea, Del. var. Delilii, Magnus.—Found by Mr Charles Bailey in a canal near Manchester, the water of which is raised to a warm temperature by the steam, &c., of works abutting on it. The members will find an exhaustive account of this plant in the memoir, by Mr C. Bailey, I was enabled to present to the Society last year.

Schœnus ferrigineus, L.—Found by Mr Brebner on heathy ground near Loch Tummell, in Perthshire, in 1884, but determined by Dr B. White, of Perth, in 1885. In Europe it is scattered over a good many parts, but it is by no means general, and is not known out of Europe. It should be looked for in damp heathy ground in other parts of Scotland.

Carex stellulata, var. *Grypos* (Schuh.)—Found by the Messrs Linton in Glen Shee, East Perthshire. In Reichenbach's "Icones Floræ Germanicæ et Helvetiæ," it is figured as a species, but is now generally considered only a variety of *stellulata*.

Carex frigida (All.)—Found by the late Mr Sadler in the corrie of Loch Cean-Mor above Glen Callater in South Aberdeenshire.

Carex ustulata (Wahl.)—Re-discovered last year (1885) in one of the mountains in Glen Lyon, Perthshire, by Mr Brebner, who unfortunately met with an accident after gathering four specimens only, for one of which I am indebted to the finder, through Dr White, of Perth. There is not the slightest doubt of its being the true plant, as I showed Dr White by sending him Scandinavian specimens, and I was very pleased to show Mr Symington Grieve, of Edinburgh, that it was the true plant, when I had the pleasure of a visit from him last January. He acknowledged that he had some doubt, as the "second party" could not find it. It is a most satisfactory find, thus confirming the accuracy, in this instance, of Don, though not for Ben Lawers, whence he reported it.

Carex salina (Wahl), var. *Kattegatensis* (Fries sp.), Almquist. —Found by Mr Grant of Wick in abundance along some distance of the River Wick. (A full account of this will be found in the Botanical Exchange Club Report which I sent the Society last year.) This is a very interesting addition to our Flora, belonging as it does to a group of Carices which belt the globe near the Arctic regions, descending here and there further south as Gotebog in Sweden, and Maine in the North United States. One Swedish station is nearly one degree further south than its

Caithness station, so I should not be surprised to hear of its discovery by some of the rivers that flow into the Moray Firth.

Carex acuta, L., var. *prolixa* (Fr. sp.)—Found as long ago as 1844 by Mr Priest in Norfolk. I found a specimen in Mr Glaspoles' herbarium; and again this year a specimen in the herbarium of the Rev. Mr Linton, gathered by Mr Cross near Ely, in Cambridgeshire.

Carex acuta, L., var. *gracilescens* (Almquist).—Found by Mr A. Fryer in Cambridgeshire, and by Mr Beckwith in Shropshire.

Carex aquatilis, Wahl. var. *epigejos* (Hartm.)—This, described as a species by Fries, and named the same year by Dr Lange *C. borealis*, was found in Perthshire by Dr White of Perth.

Carex aquatilis, Wahl. var. *cuspidata* (Laestidius).—Gathered on the banks of the River Wick in Caithness last year by my friend Mr F. J. Hanbury, among whose specimens of *salina* I found it, my name having been since confirmed by Dr Almquist of Stockholm.

Carex aquatilis, Wahl. var. *virescens* (Anders).—A pretty form of this plant found in Perthshire.

Carex stricta, Good, var. *turfosa* (Fr. sp.)—Described by Fries as a species. Found by Mr A. Fryer in Cambridgeshire.

Carex rigida, Good, var. *inferalpina*, Laestidius.—Found by Mr F. J. Hanbury on the little Culrannoch in Forfarshire last year. I have little doubt that the plant referred to by Dr Boswell in the third edition of English Botany as occurring in Little Craigendahl, Braemar, and simulating *aquatilis*, is the same.

Carex vesicaria, L., var. *diochroa* (Anders).—I have only seen a single specimen of this gathered on Ben Lawers by Mr G. C. Durce of Oxford.

Spartina Townsendii (Groves).—Near Southampton, a grass coming somewhat between *stricta* and *alterniflora*.

Agrestis nigra (Withering). — Found by Mr Bagnell of Birmingham in Warwickshire, and since in several English counties, and in Fifeshire by Dr Boswell.

Calamagrostis strigosa (Hartm.), Stivhaarct Ror., stiff-haired reed.—Marshy ground, formerly Loch Duran, near Castleton, in Caithness, Scotland. Mr James Grant, of Wick. A native of Finmark, Lapland, North Norway, in Europe, and Nova Zemblia. Sir J. D Hooker, in his paper on "Arctic Plants" in the Transactions of the Linnean Society, makes the *C. aleutica* (Bongard)

and *C. Nutkaensis* (Trinius) to be the same as *strigosa*, recording it also as a Greenland plant, but it is unknown to the Danish botanists as such; if this is correct it will extend its distribution to Arctic, East and West America, and North-east Asia.

When Dr Smiles' "Life of Robert Dick" appeared, I noted his record of finding the "Lapland Rush *(Calamagrostis lapponica)*" at Loch Duran. I wrote to Mr Grant, asking him to explore the loch, and send me specimens of the plant, as I suspected it could hardly be the true *lapponica* of Wahlenberg. In 1883 he wrote—"The loch has been drained, and I fear the plant is lost." However, it was not until last July that he could make a thorough search, and he was rewarded by finding Dick's plant; he kindly forwarded me some specimens. I found it was certainly not the *lapponica* of Wahlenberg nor that of Hooker, which, Dick no doubt thought it might be. I found, on examination, it was either the *strigosa* of Hartman or the *C. borealis* of Laestidius, but having no specimens of either to make sure, I sent it to my friend, Mr N. E. Brown, of the Kew Herbarium, asking him to compare the specimen with those in Fries Herbarium Normale. His answer was—"The specimen must be *C. strigosa*, though the ligule is not quite so acute as in the typical specimens." Since then, I have sent examples to Dr Almquist, of Stockholm. Concerning the name given to it, he says the specimens are very near the Norwegian examples. It is one of the most interesting additions to the British Flora ever made, for in conjunction with *Carex salina* and others, it shows how close the affinity of the Flora of North Scotland is with that of Scandinavia, and I venture to predict, that other Scandinavian species will yet be found, not only in Caithness, but in the Shetland Isles and other parts of Scotland, especially north of the Caledonian Canal.

Scandinavia is very rich in the genus *Calamagrostis*, and opinions differ as to whether some of the plants are hybrids or not. Anyone interested in changes in plant-names could find plenty of materials in this genus in the successive editions of Hartman's "Handbook of the Scandinavian Flora," from the first to the eleventh.

Lycopodium complanatum.—Found by Rev. Mr Reader in Gloucestershire, and since in several counties, though several are doubtful, and Dr Boswell doubts any of the specimens being the

true plant; but they are confirmed by Mr J. G. Baker and Mr Carruthers.

Chara stelligera (Bauer).—It was my good fortune to discover this in abundance in Filby Broad, Norfolk, and the next year in Heighan Sound, near Hickling. Since that date it has been found in several other broads by Messrs Holmes, Hanbury, and Groves.

Chara Brannii (Gmel.)—Found by Mr C. Bailey with *Naias graminea* near Manchester.

Chara polyacantha (A.H.)—Not well separated from *C. hispida* till lately. It is now known for several Scotch and English counties.

Chara baltica (Fries).—From Cornwall, where it was found by Mr Curnow.

Chara intermedia (Fr.)—Norfolk; found by Mr Groves.

Chara contraria (Fr.)—Found by Mr Groves in Cambridgeshire, and by myself in Norfolk the same year.

Carex helvola (Blytt), in Scotland.—Having had occasion lately to carefully examine specimens of *Carex curta* named by our British botanists, "alpicola (Wahl)," to see if I could discover whether we had the true *C. vititis* (Fr.) in Britain, a specimen from Lochnagar on being dissected proved to be *C. helvola* (Blytt). To make quite sure I sent half of the specimen to Dr A. Blytt of Christiana, and he wrote a few days ago confirming my name. The Lochnagar specimen is labelled—"Ex Herb Edinburgh Botanical Society. Carex curta alpicola (Wahl). Lochnagar, August 11, 1846. Prof. J. H. Balfour." This was three years before *helvola* was described by Blytt in Fries' "Botaniska Notiser." I have little doubt it will be found in other Herberia under the same name. By the kindness of Dr Blytt, I am able to send a scrap of the species, which is at any member's disposal.

Equisetum litorale (Kühelwein.) — Found by Mr Beeby on Bisley Common, Surrey, where it was growing in pure white sand, overlaying peat. This is an interesting addition to our Flora, and perhaps more so because found in so well searched a county as Surrey is supposed to be. In Europe it occurs in Denmark, North Germany, South Sweden, Bohemia, Austria, North and Mid Russia; in France and Switzerland, but very

rare. It was discovered by Kühelwein near Oranicubaun, in Middle Russia. It was thought by Ruprecht to come near the var. *campestre* and *articum* of *C. arvensis*, but considered a hybrid between *arvensis* and *limosum* by some German botanists, their usual way out of a difficulty in placing a plant.

SPECIAL LECTURES.

I. 20th November, 1885.—*An Evening with the Microscope.* By Mr J. Wilson.

II. 22d January, 1886.—*Some Points of Insect Physiology.* By Rev. R. Mullins.

III. 19th February, 1886.—*Human Anatomy and Physiology.* By Mr J. Rutherford.

IV. 19th March, 1886.—*The Eye.* By Dr J. Cunningham.

V. 9th April, 1886.—*Buttercups, Primroses, and Daisies.* By Mr J. Wilson.

VERSES

For the Dumfriesshire and Galloway Natural History and Antiquarian Society, November, 1885.

"A primrose by the river's brim,
Or at the cottage door,
A yellow primrose was to him,
And it was nothing more."
Wordsworth.

"To him who in the love of nature holds
Communion with her visible forms
She speaks a various language."
Bryant.

The book of Nature open lies,
Where all may read, who care
To search her mysteries, and learn
The symbols graven there.

But deeper truths can be revealed,
With Wisdom as a guide,
To lead by upland brake and glen,
Or tranquil river side.

An earnest few together tried
To form a student band,
To ponder Nature's forms that lie
Profuse on every hand.

To lure awhile from sordid toil,
To mark, and learn, and know
The perfect fitness, perfect ends,
God's lowliest works can show:

To search by grove and secret spring
Each haunt of bird and flower,
While bounding pulses glad proclaim
That knowledge giveth power:

The sequence of the floral year,
Unerring Nature's plan,
The treasure stored in mine and case,
God's bounteous gifts to man:

To scan the stars that nightly rise
With solemn stately march,
To name the glittering orbs that glow
On Heaven's midnight arch.

Oft old historic ground was trod,
And battlemented wall,
Now hoary ruin, echoing once
The warrior's martial call.

From every year that glided on
Were snatched a few brief days,
To dedicate to noble ends,
And walk in Wisdom's ways.

The bygone summer scarcely sped,
A boundless wealth has giv'n
Of bloom and blossom, golden days,
Spanned by a smiling heaven.

Old haunts were visited once more,
Where Nith's rock-circled wave
Stole softly through o'ershadowing woods,
Or paused in mimic cave.

Once more were seen the girdling walls,
Where gifts from every clime
Are brought, the added treasures mark
Its calendar of time.

Where Urr its sluggish waters rolls,
To meet the western sea,
A noble house its portals op'ed
In hospitality.

Its woods and gardens tended with
A watchful, guardian care,
That wins the alien stems to thrive
In kindly Scottish air.

The winter days are darkening now,
And storms for sunshine give,
But records of these brighter hours
In storied annals live.

AGNES MOUNSEY.

Field Meetings, 1884.

Corncockle Quarry, Spedlins Tower, &c.—*3d May*, 1884.

The first Field Meeting of this session was held on the 3d May, when, according to the programme, "Wood Castle, Lochmaben, Corncockle Quarry, Spedlins Tower, St. Ann's Bridge, and Raehills Glen would be visited." Owing to the weather being cold and unsettled, a party of sixteen only assembled at the Fountain at the hour of starting (9.30 A.M.), and took their seats in the waggonette which was in waiting to convey them to the places mentioned. After a sharp drive for half an hour through the keen morning air, a halt was made at Torthorwald to allow the members to inspect the old castle, which has been for centuries a conspicuous object in that picturesque landscape. The origin of the castle is traditional, and the first authentic account of it is in the thirteenth century, when William Carlyle received from his uncle, King Robert Bruce, a charter of the lands of Collin and Roucan. From the style of the building, it is supposed to be between 700 and 800 years old, and like other noble ruins throughout the county, it has suffered severely from vandal hands.

Returning to the conveyance, after spending half an hour in examining the ruins and collecting the spring flowers in the vicinity, they proceeded over the hill towards Lochmaben. At Ryemuir sad mementoes of the two very heavy storms of the preceding winter were seen. Almost all the trees in the plantations were either torn up by the roots, or snapped across the middle. The devastation at Corncockle was even more complete, for there almost 100 acres of wood were left without a tree standing. The next halt (after Torthorwald) was made at the farm house near Wood Castle, where the party dismounted and walked through the adjoining field to the Camp. The Camp, for such it is, is evidently of Roman origin, for a Roman Road runs past the base, and it is in a direct line between Burnswark on the east, and Camp Hill, Tinwald, further to the west. It measures 278 feet across the top at the greatest diameter from terrace to terrace, and has two entrances—one on the north-east side, and the other on the west. From the Camp the drive was continued to Corn-

cockle Quarry, where two hours were spent in examining the different cuttings. Here a business meeting was held, when Captain J. J. Hope-Johnstone was elected a life member, and Mr J. Rae an ordinary member. This quarry has been fully described by the late Sir W. Jardine, Bart., and also the numerous footprints of the extinct tortoises which were discovered here. On three large slabs of the sandstone several of these impressions were noticed.

Spedlins Tower was next visited, but owing to an oversight, only the exterior could be examined. It is situated on the bank of the Kinnel, and belongs to Sir A. Jardine of Jardine Hall. The tower is a square structure in the Scotch Border style, and has a turret at each of the four corners. The only entrance is on the north side, through an arched doorway, over which is a large square stone with the Jardine crest and the date 1605.

Returning to the conveyance, which was left at the quarry, the party was forced to beat a hasty retreat to one of the sheds, for the rain and hail, driven by a strong north-west wind, was too much for even the nerves of the naturalists. Having waited for nearly an hour till the storm passed, it was decided to abandon the rest of the programme for the present, and to return to Dumfries by the way of Elshieshields and Kirkmichael.

Owing to the lateness of the spring very few botanical specimens were collected; however the following plants were picked up during the excursion:—*Cardamine hirsuta*, *C. pratensis*, *Viola tricolor*, *Montia fontana*, *Alchemilla vulgaris*, *A. arvensis*, *Potentilla Fragariastrum*, *Chrysosplenium oppositifolium*, *Galium cruciatum*, *Veronica hederifolia*, *Lamium album*, *Nepeta Glechoma*, *Luzula campestris*, and *Primula veris*, which is not common in this district, found near Torthorwald Church. *Asplenium Ruta muraria* is plentiful among the stones of Torthorwald Castle, and *Funaria hygrometica*—a beautiful moss—covered large patches of the ground near Templand Village.

Southwick Glen and Douglas Hall.—*7th June*, 1884.

The second Field Meeting of the session was held on the 7th June, when Southwick Glen and the shore from there to Douglas Hall were visited. A party of thirty assembled at 9 A.M. at the Fountain, and having taken their seats in three waggonettes

that were in waiting, they proceeded to Southwick mansion house, by way of Newabbey and Kirkbean, which they reached at noon. On their arrival they were met by Mark J. Stewart, Esq., who had not only given permission to explore his grounds, but also had invited the members to luncheon. Under Mr Stewart's guidance the whole party first visited the policies to see the silver firs *(Picea pectinata)*, some of which were the finest in Scotland. Many of these noble and handsome trees succumbed to the force of the severe gales in December, and especially to that on 21st January. One of them which escaped the fury of the blast measured 15½ feet in circumference at the height of four feet from the ground. After arranging to meet at the mansion house at 2.30, the party divided, the majority going up the sides of the Southwick burn, thence through the rough ground, and over an adjoining hill to the plantation, in which is the private burying ground of the Stewart family. From there they returned to the house, passing through several plantations and fields, picking up specimens as they went.

The smaller portion, under the guidance of Mr Stewart, visited the well-stocked gardens, and the home farm, on which Mr Stewart had been cultivating the natural grasses. Punctual to arrangement, the members re-assembled, and were welcomed by Mrs Stewart and Miss Stewart.

Having partaken of luncheon, a business meeting was held in the dining-room, at which Mr Stewart was elected a life member of the Society, and Mr A. K. Fotheringham an ordinary member. On the motion of Mr Wilson, Vice-President, it was agreed to have a special meeting to Raehills Glen in the third week in July, and on the motion of Sheriff Hope, Vice-President, a hearty vote of thanks was awarded to Mr Stewart and to Mrs and Miss Stewart for their kindness and trouble.

At three o'clock the party took leave of their host and hostess, and proceeded to Douglas Hall, several of them preferring to walk along the road and the shore to collect specimens, while the remainder came along in the machines. After spending some time on the sands and cliffs, they re-assembled at seven o'clock for the homeward journey, by way of Dalbeattie, and reached Dumfries about ten o'clock, having had a most enjoyable day.

The following plants were found:—*Barbarea vulgaris*, *Brassica campestris*, *Cardamine sylvatica*, and *Sisymbrium Alliaria*, near

Whinnyhill. *Geum urbanum, Spergularia rubra, Lysimachia nemorum, Helianthemum vulgare, Sedum anglicum, S. Telephium, Galium saxatile, Euphrasia officinalis, Gnaphalium dioicum, Carex panicea, C. binveris, Pinguicula vulgaris, Vicia angustifolia, Polygala vulgaris* (blue, pink, and white specimens), *Corydalis claviculata, Nephrodium spinulosum* (not common), and *Polypodium phegopteris* on the hill and in the fields and wood near Southwick mansion-house. *Linaria cymbalaria* at the bridge, and the following on the way to Douglas Hall:—*Anchusa sempervirens, Lithospermum officinale* (rare), *Geranium sanguineum, Rosa spinosissima, Glaux maritima, Primula veris, Anthyllis Vulneraria, Blysmus rufus, Triglochin maritima;* and *Erodium cicutarium* (rare) at Douglas Hall.

Mr Lennon supplies the following note respecting the entomological finds:—So far as I have seen of this current year, all the various orders of insects appear exceedingly scarce. Entomological experience tends to prove that after a mild wet winter, such as we have had this season, insects are as a rule much scarcer than after a cold hard frosty winter. The results of last Saturday present a case in point. The day was exceedingly fine—just such a day as one would naturally expect to find teeming with insect life; and if there is a spot in the south of Scotland where an entomologist would expect to find insects in abundance, it would doubtless be in those beautiful woods and grounds round Southwick House. No doubt they are there when the seasons are suitable for them. Among the diurnal *Lepidoptera* we observed faded specimens of *Anthocharis Cardamines, Satyrus Megœra, Cynthia Cardui;* also some fine specimens of the *Argynnidi*, but whether it was *Argynnis Selene*, or *A. Euphrosyne*, could not be defined, as the insects were on the wing. *Coleoptera* were very scarce. In some damp boggy places *Elaphrus cupreus* put in an appearance. Under stones on the high ground we found *Carabus catenulatus* and *C. violaceus, Clivina collaris, Dyschirius æneus*, and *globosus*. Among the *Hymenoptera* we found fine specimens of *Bombus Lapidarus, B. Locorum, B. Virginalis, Apathus Vestalis*, and *A. Campestris*.

Craigdarroch and Barjarg.—*5th July*, 1884.

The third Field Meeting of the session was held on the 5th July, when a party of twenty-five met at the Fountain at nine o'clock to take part in it. Soon after the appointed hour they drove off in two waggonettes by way of Dunscore and Moniaive, intending to visit the places of interest *en route*. The first halt was made at Holywood, to allow the members to visit the so-called Druidical Circle on the farm of Kilness. Among the party was the Rev. Mr Lucas, F.S.A., London, who has given special attention to the subject of standing stones and their markings. There are eleven stones yet standing, and as to how they came there, and the objects they served, there were various opinions and doubts expressed. The largest stone was estimated to weigh about 12 tons, the next largest 9 tons, and the smallest between 2 and 3 tons. Leaving the Druidical Circle, the party resumed their journey, passing through Dunscore Village, and enjoying the picturesque scenery of the charming valley of the Cairn. At the lower end of the parish of Glencairn, Dr Gilchrist directed the attention of the party to the channel of the river Cairn, as that river has unmistakably changed its course at a not very distant date. He pointed out the old course, and suggested that a lake then covered the hollow, which to-day is fertile fields. Proceeding further the party reached "Maxwelton Braes," which were as "bonnie" and as attractive as ever. Further along the road a halt was made to inspect a stone with the name of William Smith upon it. It is supposed to mark the spot where a Covenanter of that name was massacred, and who was buried in Tynron Churchyard. Another stone in that Churchyard bears the following inscription :—

> "I, William Smith, now here do ly,
> Once martyred for Christ's verity ;
> Douglas of Stenhouse, Laurie of Maxwelton
> Caused Coronet Baillie give me martyrdom.
> What cruelty, they to my corpse then used
> Living may judge—me burial they refused."

In Glencairn Churchyard there are four martyrs—John Gibson, James Bennoch, Robert Edgar, and Robert Mitchell—buried ; but time would not permit the party to inspect the stones raised to their memory.

On arriving at Moniaive, the old market cross, which was erected there in 1638, was visited, and also a monument

erected on an adjoining height to the memory of the Rev. James Renwick, the last of the martyrs, who was a native of this village. The party now divided, a few going to visit the Caitloch Cave, while the majority proceeded on foot to Craigdarroch, about two miles distant. On arrival, the latter were cordially welcomed by Mr A. Fergusson and hospitally entertained. This family is the oldest in the parish, and has been on many occasions nobly distinguished. During the persecution of the Covenanters, the Fergussons were the staunch friends of the oppressed. In 1689, at the battle of Killiecrankie, John Fergusson, one of the noble defenders of the "Kingly Covenant," was slain, and the saddle on which he rode is now preserved at Craigdarroch, and was exhibited to the party. A number of interesting objects were exhibited; chief among them was "The Whistle" of the contest sung by Burns. It is not an ebony whistle, as described by the poet, but tawny-coloured and probably of olive wood. It is mounted in silver, on which the Fergusson coat of arms is inscribed, and the words—"Whistle won by Craigdarroch, sung by Burns."

> "Thy line that have struggled for Freedom with Bruce
> Shall heroes and patriots ever produce;
> So thine be the laurel, and mine be the bay;
> The field thou has won, by yon bright god of day."

Mr Fergusson also exhibited a document which was only recently discovered among family papers, and is of great interest. This was the last will and testament of Annie Laurie, subscribed by two witnesses, and written upon a sheet of paper. Having visited the gardens and grounds the party took leave of Mr Fergusson, but before doing so, on the motion of Mr Brown, they accorded him a hearty vote of thanks. Returning to Moniaive and joining the other party, they commenced the homeward journey under a pelting thunder shower of hail and rain. The next place visited was Barjarg, and here they were cordially welcomed and hospitably entertained by Mr Hunter-Arundell. Having partaken of refreshments they were shown a number of handsomely illuminated manuscripts of pre-Reformation dates. One of these was a copy of the Magna Charta on vellum. It was of Mr Hunter-Arundell's library that Carlyle, in writing to his brother in 1833, says — "Yesterday I drove over to Barjarg in the middle of a thick, small rain, to get the keys of the Library, which I find most handsomely left for me, so that I

could seize the catalogue and some half dozen volumes to be returned at discretion. It is really a very great favour." Having inspected a number of the rare old *tomes* and the collection of paintings, the party returned to the dining room. Here a business meeting was held, when Mr F. Maxwell of Gribton, and Mr R. Murray, Dumfries, were elected members. On the motion of Dr Gilchrist (President), the thanks of the Society were given to Mr Hunter-Arundell. Afterwards the party visited the lime works and the quarries, but as the day was now far advanced these were only done in a cursory manner. At seven o'clock the party once more resumed their seats, and continued their homeward journey, driving past Friars' Carse, Ellisland, and Lagg Churchyard, and arrived in Dumfries about nine o'clock.

Garrel Old Churchyard, Raehills Glen.—19*th July*, 1884.

As arranged at the Field Meeting in June, a special excursion was held on this date to visit the places omitted in the programme for May. At the hour of starting (9.30 A.M.) only a dozen members assembled, and these having taken seats in a waggonette, were soon on their way for the Glen.

At Garrel the first halt was made, where a half hour was spent in the roofless fane and among the tombs. At Hartfield farm they were joined by the worthy tenant—Mr M'Adam—who had kindly offered to conduct the party through the Glen. Acting under his directions, they continued their drive to the saw-mill at Raehills, and there dismounted. Having arranged to meet the waggonette at Hartfield farm, they proceeded to the farmhouse of Boreland, where a rude stone bigging, of antique architure, was examined. From there the walk was continued up-stream for about a mile, to inspect the deep channels which the burn has worn in the Silurian rock. At this place pieces of the rock richly studded with iron pyrites, and several graptolites were picked up. Following the source of the Duff Kinnell, the party wended their way past the mansion of Raehills, St. Ann's Bridge, until Hartfield was again reached, about five o'clock. Having partaken of a welcome tea, and passed a vote of thanks to Mr M'Adam and Miss M'Adam, they started for Dumfries, which was reached about eight o'clock.

The following is a list of plants found during the excursion : — *Hypericum humifusum, H. pulchrum, Malva moschata, Geranium sylvaticum, Spiræa salicifolia, Geum urbanum, Circæa lutetiana, Galium palustre, Filago germanicum, F. minima, Gnaphalium sylvaticum, Senecio aquaticus, Crepis paludosa, Scrophularia nodosa, Habenaria bifolia, Potamogeton natans, Narthecium ossifragum, Juncus conglomeratus, J. squarrosus, J. compressus, J. articulatus, Luzula campestris* var. *congesta, Scirpus setaceus, Carex pulicaris, C. stellulata, C. pallescns, Aira flexuosa, Molinia cærulea.* The oak and beech ferns were very abundant on both sides of the glen, but only one specimen of the Hard Shield (*Aspidium aculeatum*) was seen. About 30 specimens of mosses were collected, the rarest being *Bartramia fontana, B. Pomiformis, Dicranum majus, Ulota intermedia, Ulota Bruchii,* and *U. crispa.*

Garpel Glen and Moffat District.—*2d August,* 1884.

The fourth Field Meeting of the session was held on the 2d August, when Garpel Glen and places of interest in the Moffat district were visited. About a dozen left Dumfries Station by the 9.20 A.M. train for Beattock, where they were joined by other members and Mr Dairon, F.G.S. From the station they proceeded through the wood adjoining, and over the rising ground to the summit of the Beattock Hill. Here half an hour was spent in inspecting the remains of an old British Camp and in enjoying the delightful view of the surrounding country. From here the party proceeded across the moor to an adjacent height to visit another Camp, but whether this was of Roman or British origin is doubtful. Continuing the walk along the high ground, through one or two plantations, the party arrived at Auchencas Castle, where another halt was made. This Castle was a formidable stronghold in earlier times, and from its commanding position on the summit was an important key to the pass through the hills. It was a square structure, measuring 120 feet either way, and had at each corner a circular turret. The walls measured ten feet in thickness. Here a business meeting was held, when Mr Wilson, Vice-President, presided, and Mr Dairon, F.G.S., was elected an honorary member.

The party next proceeded down the Garpel Glen, but as they entered it, an ominous sign-board cautioned the visitors from "gathering flowers and ferns." This caution was rigidly respected, for with the exception of the common agrimony *(Agrimonia Eupatoria)*, none of the plants were deemed worthy a place in the botanist's vasculum, the glen having long ere this been pillaged by the wanderers of all the scientific societies in the country. As no flowers were to be had, two hours were spent in collecting mosses and searching for graptolites among the shales and in the bed of the stream. The party continued their course down the stream until they came to the railway bridge, when they ascended the embankment and walked along it until Beattock Station was reached. The old bridge across the Annan was next visited, and from there, they continued along the road to Moffat, halting, however, at the "three stanin' stanes," and visiting Loch House Tower. At a short distance from Moffat, near the railway bridge, they visited a section of the railway cutting where a dyke of trap was exposed Arriving in Moffat about five o'clock, they spent the interval until train-time in visiting the wells or other places of interest in the town.

Among the finds of the day were—*Empetrum nigrum*, in fruit; *Parnassia palustris*, and *Viola lutea*. The following graptolites were identified by Mr Dairon:—*Monograptus sagittarius*, *M. tenuis*, *M. intermedius*, and *Diplograptus foliaceus*.

Lochmaben, Dormont, and Kelhead.—*6th September*, 1884.

The last Field Meeting of the session was held on the 6th September, when a party numbering about twenty left the Fountain at 9.30 in waggonettes for Lochmaben. Arriving at Bruce's Castle, they were met by the Rev. W. Graham, who conducted them round the ruins, and narrated several incidents connected with the history of the building. Mr Graham expressed the hope that Mr R. Jardine, M.P., would co-operate with Mr Hope-Johnstone and the Town Council of Lochmaben in having the interior and exterior cleared of rubbish, and the structure repaired. Having spent an hour in examining the ruins, and awarded Mr Graham a vote of thanks, they returned to the conveyances and continued their journey to Dormont.

On entering the grounds at Dormont House, they were joined by Mr Johnstone of Castlemilk and Mr Smith, the gardener, who was to conduct them through the policies. The object of the visit here was to inspect the supposed original bed of the river Annan —for that river now flows past Hoddam Castle, about six miles distant—and to ascertain the cause of the change if such were the case. A large pond near Dormont House was first inspected, for it was stated by some of the party that this originally formed a portion of the river. As there was nothing visible to justify this opinion, they proceeded along the supposed course of the river until a point known as the Dormont Rocks was reached. Here the rocks are supposed to have been upheaved by volcanic agency, and it is to this that the supposed altered course of the river is due. As the time at the disposal of the party was limited they were unable to investigate the disputed point, so the question was left until a future occasion for solution.

From Dornock they proceeded to Kelhead Quarries, where a couple of hours were spent in examining the different sections of the limestone rock, and collecting specimens of corallines and other fossils. Having partaken of a refreshing tea—prepared by one or two ladies—they resumed their seats in the conveyances for the homeward journey about half-past five, and arrived in Dumfries about seven o'clock.

Field Meetings, 1885.

Spottes Glen and Moat of Urr.—*2d May*, 1885.

The first Field Meeting of the session was held on the above date, when a party of eighteen left Dumfries by the 9.27 a.m. train for Dalbeattie. On arriving there they were joined by two or three others, and proceeded thence in waggonettes through the beautiful valley of the Urr to Spottes. Here they were met by Mr Herries of Spottes, who had kindly granted permission to visit the romantic glen, and who now conducted the party to it. Leaving the road at the bridge they followed the winding stream for about a mile, when a halt was made at the Glen farmhouse, where Mr Herries pointed out several large stones in the wall, which appeared to have been formerly part of an ecclesiastical edifice, and remarked that a chapel at one time had been built in the adjoining field. The only trace of this building now seen was a few feet of a wall on the steep bank of the stream. The party now separated, and the members explored the glen and adjoining woods until two p.m., when they reassembled and partook of luncheon, which had been provided by Mr Herries. Thus refreshed they returned to the mansion house, when the botanists explored the woods adjoining, and visited the beautiful flower gardens. The geologists, under the leadership of Dr Gilchrist, examined Mr Herries' collection of rocks and minerals. Before leaving Spottes, a short business meeting was held, and, on the motion of Mr W. H. Maxwell of Munches, Mr Herries was elected a member of the Society. On the motion of the President (Dr Gilchrist), Mr Herries and his son were thanked for the hearty welcome they gave to the Society, and for conducting them to the Glen, through the garden and grounds. Having bidden adieu to Mr Herries, they resumed their seats in the waggonettes about four o'clock, and were soon on their way to the Moat of Urr. The Moat is situated on the west bank of the Urr, about a mile from Dalbeattie, and is the largest, as well as one of the most complete in Britain. Owing to the unavoidable absence of Mr J. H. Maxwell, of Castle-Douglas, who was to describe the Moat, the Secretary read a short extract

from that gentleman's *Guide Book to the Stewartry*, giving the traditionary account of Bruce's combat with Sir Walter Selby, and of Bruce conferring these lands on the Sprottes of Urr.

It was remarked that plants were in blossom about three weeks earlier than last year, and the following among others were found during the day:—*Cardamine hirsuta*, *Draba verna*, *Sisymbrium Alliaria*, *Viola sylvatica*, var. *Riviniana*, *Lychnis diurna*, *Geranium lucidum* (a new locality), *Geum rivale*, *Bunium flexuosum*, *Adoxa moschatellina* (very fine specimen), and *Aspidium aculeatum*, var. *lobatum*. About 40 specimens of mosses were picked up, including *hypnum alopecurum* in fruit.

Parton and Loch Ken.—*6th June*, 1885.

The second excursion of the session was held under most favourable auspices, for the weather for three or four days prior was warm and summer-like, and the district to be visited had every attraction that the members could wish. Accordingly, a larger party than usual left by the early train for Parton Station, and on reaching Castle-Douglas their number was increased by a few members from Kirkcudbright. On arriving at Parton they were met by Mr M'Andrew, of New-Galloway; the Rev. Mr Pattullo, Mr Pattullo, jr., and others. Mr Pattullo having kindly invited the Society to luncheon, now offered to guide the party to places of interest in the district. The first place visited was the Slate Quarries, but as these had not been worked for several years the loose *debris* only could be examined, although the geologists had a good opportunity of inspecting the various cuttings. A halt was made for about an hour here, when the president, Dr Gilchrist, described the various details of splitting the slate, and mentioned the various characteristics of this rock. The botanists explored the adjoining woods and fields until 1 p.m., when it was arranged that the party should assemble at the Old Church. The modern church was erected in 1824, but in the churchyard adjoining are the remains of its predecessor, which had been built in 1592.

Mr Barbour, V.-P. (architect), described the old building, and now supplies the following note:—

The Church of Parton is situated on the banks of the Dee, and near it within the churchyard are the remains of an older church, said to have

been built in 1592, and to have measured 72 feet in length. The pulpit was of oak, carved, and inscribed with the date 1598. It is now in the Antiquarian Museum, Edinburgh. The remains of the church consist of the east gable wall and small portions of the two side walls attached to it, and the width of the building is 15 ft. 3 in. over the walls. The walls are built of the common whinstone of the district, the corners being formed of the same materials. The door, which is in the south wall, and a window in the east wall, have hewn and chamfered dressings of a whitish sand or gritstone; and the lintel of the window deserves special notice. It is curved lengthways, and gives to the window top the form of a segmental arch, and its cross-section shews a hollow on the under side, a round on the upper, and between them a flat edge about two inches broad, on which there is an incised inscription in old English characters. The stone has evidently been part of a dripstone of an arched opening, and there is little doubt it is of mediæval date.

Two corbels of white stone, moulded and having leaf carvings, project from the outer face of the gable wall at corresponding points near the skewpits, which, as at present placed, could not have served any practical purpose, and they have the appearance of being old work. Probably all the hewn stones are remains of an earlier church.

The bell turret is built of white sandstone, and there is a small panel in the gablet of it, inscribed: Laus deo, 1636.

The bell in the old turret, which measures 9 inches in height and 10½ inches diameter, is still in use, as there is not one in the new church. Its age is unknown, and it bears no inscription.

The early ecclesiastical history of Parton is meagre. We learn that in August, 1296, Walter de Derrington, parson of Parton, swore fealty to Edward I., and nothing more until 1426, when John MacGilhauck was rector. He was also secretary to Margaret Countess of Douglas, whose rich tomb adorns the chancel of Lincluden Abbey. In the reign of James IV. James Hepburn, afterwards Bishop of Murray, was rector.

Some time ago, when the door step of the new church was being repaired, a sculptured stone was turned up, and Mr Pattullo, the minister, had it placed within the church for preservation, where it now is. The stone is a very interesting one, and it clearly belongs to mediæval times. It is part of a recumbent sepulchral effigy, cut in bluish white stone, and is in such excellent preservation that its position must have been within the church.

There is at the bottom of the stone an inscribed border, the letters being in old English and raised, and doubtless the border would extend round the four sides of the complete slab. The effigy has been full length and in half relief, and represented an ecclesiastic vested. The points of the feet appear above the inscribed border, and over them the *albe*. Over the *albe* is the *stole*, with ornamented end borders and fringes, inscribed in raised old English letters what appears to be the words Johnas me. Above the *stole* is a small part of the *chesible*, pointed, and coming low down, the surface of which is richly and beautifully worked in scrolls and foliations, representing embroidery, and the design possesses much delicacy and grace. This beautiful monumental slab evidently belongs to a period

when sculpture had reached a high stage of excellence. Can the effigy be ascribed to John MacGilhauck, rector of Parton, and secretary to the Countess Margaret?

Having seen the ruins, &c., the party crossed the railway to inspect a moat in the adjoining field. This one is not very large, being only 120 yards in circumference. It is surrounded by a ditch 9 feet deep. From here the party retired to the Manse, where they were hospitably entertained by Mr and Mrs Pattullo. After partaking of refreshments, a short business meeting was held in the dining room—Dr Gilchrist presiding. Miss Stewart, Dumfries; Messrs J. Coghlan, Castle-Douglas; T. A. Moryson and J. Selman, Dumfries, were elected new members. The Secretary submitted a letter received from the Cumberland and Westmoreland Antiquarian Society, stating that that Society purposed visiting Carlaverock Castle, Comlongan Castle, and the Ruthwell Cross in July, and inviting this Society to take part in the excursion. It was agreed to join in the excursion, and the Secretary was instructed to make the necessary arrangements. The Secretary also submitted an invitation from W. H. Maxwell, Esq., to visit the Munches district, and it was agreed to have a special excursion there, on 25th July, if that date would be convenient. Mr Pattullo exhibited a number of curiosities, including drinking vessels and native pottery from the Fiji Islands, which had been sent him by his son, Dr Pattullo, who is residing there.

As time would not permit visiting the "Cow's Clout," which was about three miles distant, some of the party agreed to visit Lowe's seat at Airds; while the botanists, under the guidance of Mr Walker of Crossmichael, who had kindly placed a boat at their service, proceeded to explore one of the lake dwellings in Loch Ken. With the exception of a few piles standing in the water, no other trace of the dwelling could be seen.

The following were among the plants found during the day:—*Trollius europæus*, *Draba verna*, *Polygala vulgaris*, *Spergularia rubra*, *Ornithopus perpusillus*, *Vicia angustifolia*, var. *Bobartii*, *Prunus padus*, *Sedum anglicum*, *Meum athamanticum* (not common about Dumfries, but very abundant in the meadows along the Ken), *Veronica agrestis*, and *Lysimachia nemorum*, *Botrychium Lunaria*, in a field at Chapelbrae, and *Nitella opaca*, very abundant in the Ken.

THORNHILL DISTRICT.—*4th July.*

The third meeting of the session was held on the 4th July, when, according to the programme, the party was to leave Dumfries Station by the 8.57 A.M. train for Thornhill, and proceed from there by conveyances to Drumlanrig Bridge. From there they were to walk along the Duchess's Drive, and through woods and glens by the side of the Nith to Glenairlie Bridge, where the machines and those who preferred remaining in them, would be in waiting. On re-assembling they were to visit Ballagan Moat, Tibbers Castle, and Dr Grierson's Museum. At the appointed hour 36 members left the station, and on their reaching Thornhill they were joined by Dr Grierson, and subsequently by Mr Shaw and Mr T. Brown, the latter having promised to conduct the party in their explorations. The first halt was made at Drumlanrig Bridge, to allow the party to view the beautiful scenery there, and to walk along the bank for a short distance to the foot-bridge spanning the river. Having spent half-an-hour in this delightful spot, they retraced their steps to the machines, when the botanists and those who cared for a five-mile walk started along the Duchess's Drive. The ladies and a few others took their seats in the machines and drove to Glenairlie Bridge. From Glenairlie they proceeded to the farm-house of Burnmouth, where they were most hospitably entertained to luncheon by Mr Milligan.

Owing to corn having been sown in the field in which Ballagan Moat was situated, and it being now saturated with the heavy showers of the preceding night, it was thought advisable not to visit it on this occasion, so the party resumed their seats and drove to Tibbers Castle, along the high road over Crairie Hill, thus enabling them to have a magnificent view of the valley of the Nith, which is one of the finest pieces of scenery in the south of Scotland. Tibbers Castle was reached in good time, and it was duly described by Dr Grierson. It is supposed to have been originally a Roman fortress, named in honour of Tiberius Cæsar. Very little of the structure now remains, except portions of two of the outer walls.

Under Mr Brown's guidance the party spent half an hour in the gardens at Drumlanrig, and from there they drove to the Thornhill Museum, which was reached about half-past five. Having partaken of tea, thoughtfully provided by Mary (Dr

Grierson's housekeeper), they entered the museum, where a short business meeting was held. The Secretary intimated that it had been arranged to meet the Cumberland Society on Friday, the 24th July, and that the excursion to the Munches district would be held on the 25th. They next inspected a number of interesting objects recently received by Dr Grierson, and under his guidance visited the grounds, where a large collection of alpine and other rare plants were noticed in flower. Having spent two hours here, they returned to Dumfries by the eight o'clock train, after spending a most enjoyable day. The following were some of the plants found during the excursion :—*Thalictrum majus, Cardamine amara, Geranium sylvaticum, Sedum telephium, S. Anglicum, S. villosum, Sanicula europœa, Doronicum pardalianches, Campanula latifolia, Pinguicula vulgaris, Lysimachia nemorum, Juniperus communis, Orchis latifolia, O. maculata, Habenaria bifolia, H. chlorantha, Gymnadenia Conopsea* (white and red varieties), *Listera ovata, Carex sylvatica, Melica nutans, M. uniflora, Aspidium lobatum, Scolopendrium vulgare,* and remarkably large specimens of *Polypodium Phegopteris* and *P. Dryopteris.*

Special Meeting.—*24th July,* 1885.

On Friday, the 24th July, a party of a dozen assembled at the Dumfries Station to meet the Cumberland and Westmoreland Archæological Society, and subsequently visited with them Carlaverock Castle, Comlongan Castle, and the Ruthwell Cross. At Carlaverock a short paper was read by Mr Nanson, descriptive of the Castle, and Comlongan was similarly described by Mr R. S. Fergusson when the party reached that interesting building. On arriving at the Ruthwell Cross, the Societies were met by the Rev. Mr M'Farlan, who pointed out the runes, and gave an interesting and detailed description of the monument. After partaking of refreshments, kindly provided by Mr M'Farlan, the Societies bade adieu to their host, and to each other.

Munches District.—*25th July,* 1885.

Availing themselves of the kind invitation given by W. H. Maxwell, Esq., to visit the district of Munches, a party number-

ing about fifty left the Dumfries Station by the 12.20 train for Dalbeattie. Here they were joined by some of the Kirkcudbright members, and by Mr Wellwood Maxwell, who came to welcome them, and to conduct those who felt inclined for a five mile walk by way of Barsoles Hill, Buittle Old Church, and Kirkennan Wood to Munches; those otherwise disposed were to proceed direct to Munches, halting by the way to inspect the granite quarries. As the day was most favourable, a large majority decided for the longer and more attractive walk. Accordingly the start was made without delay, and the party proceeded along the railway embankment to the viaduct across the Urr, the botanists picking up *Arenaria serpyllifolia*, *Campanula latifolia*, and *Calamintha Clinopodium*. Leaving the embankment they proceeded through Barsoles Wood, over Barsoles Hill, and one or two adjoining heights until the Old Church of Buittle was reached, noticing by the way Buittle Old Castle. On arriving at the Church they were met by the Rev. Mr Grant, and under his guidance the interior was inspected. Mr Barbour furnishes the following note respecting this very ancient and sacred edifice:—

The remains of the old church of Buittle stand within the churchyard, a little south of the present church. The situation is an elevated one, and commands extensive prospects of the broken and diversified country around. The church itself is unroofed, but its walls continue entire, or nearly so. A grateful feeling is experienced on viewing the remains and observing with what evident veneration they are regarded, and how well they are cared for. The floor is of turf, well kept; and the walls, inside and out, are wholly overgrown with ivy, trimmed, and leaving apparent the true outline of the stonework, even the lancet forms of the narrow windows being clearly traceable. The ruin, foliage-bound, and presenting, with its three high pitched gables, a characteristic outline, well defined, but softened by projecting stray leaves, viewed against the light of the descending sun, the golden rays streaming through the openings, is truly picturesque and beautiful. The building consists of two parts—the church and the chancel, divided by a chancel arch. The church measures 44 feet in length by 16 feet 3 inches in width inside the walls; and the chancel 29 feet 3 inches in length by 19 feet 6 inches in width. The total length of the building over the walls extends to 82 feet, and its width at the church is 21 feet 9 inches, and at the chancel 25 feet. The side walls of the church measure 7 feet 6 inches, and those of the chancel 10 feet in height above the present turf floor; but the original floor was several feet below the present surface. The opening of the chancel arch measures 9 feet 10 inches in width, 6 feet 9 inches from the turf floor to the top of the impost capital, and 13 feet 6 inches to the apex of the pointed arch. In the west gable of the church is the entrance doorway, which has a semi-circular arched top. Over it is a narrow lancet-topped window,

and on the apex of the gable is a bell turret. The east gable is pierced by three narrow lancet-topped windows. The dressings of the door and window spaces are hewn and chamfered. The chancel arch is a pointed one, and its ring is double chamfered. On the jambs of the archway are formed round pointed edged, shafts, having capitals, the necks of which are bell-shaped and their upper members are semi-octagonal on plan. Over the chancel arch the wall is carried up to form the west gable of the chancel. The walls are built of whinstone, and the dressings are of millstone grit. The style of the building is early English, some members of the capitals of the chancel arch shafts being allied to Norman work. A glance is sufficient to discover that this little parish church had its origin in pre-reformation times. There is, well marked, the arrangement and division of it, suitable for the service of the old religion—church and chancel. The architectural character of the edifice indicates considerable antiquity, the forms exhibited being common in buildings belonging to the end of the 12th and the early part of the 13th centuries. The church of Buittle is mentioned as early as 1297, when Master Richard de Havering, clericus, had letters of presentation to the Church of Botel, vacant, and in the gift of the King, addressed to the Bishop of Candida Casa. The church, the remains of which are before described, is probably the same building to which Richard de Havering was presented by Edward I. of England. In this same building also we may suppose the pious Lady Devorgilla often worshipped when residing at her neighbouring castle of Botel (from whence she dated her statutes relating to the endowment of Balliol College, Oxford, in the year 1282), as did also her son John Balliol, King of Scotland, and the subsequent Lords of Galloway, the Earls of Douglas. The church was dedicated to St. Colmonel. It was probably granted, as was that of Kirkennan in 1275, by Lady Devorgilla to the Abbey of Sweetheart, as there is mention of it being regranted by her successors in the Lordship of Galloway to that Abbey, and in which connection it continued until the passing of the Annexation Act in the year 1587. The old church of Buittle is worthy of being better known than it appears to be. It is a fine specimen of an ancient Scottish parish church, rare at least in this district, and as a landmark of history it is interesting and valuable.

Leaving the churchyard the party directed their steps towards Munches, over Kirkennan hill, and through Kirkennan wood, which was strewn with fallen trees, the effects of the severe storms of the winter 1882-83. Arriving at Munches about 5.30, they were met by Mr Maxwell and Mrs Maxwell, and most hospitably entertained, as the other party had already been. After luncheon the gardens and policies were inspected.

On the motion of Dr Grierson, seconded by Rector Chinnock, a vote of thanks was accorded to Mr and Mrs Maxwell, and to Mr Wellwood Maxwell, for the hearty reception given, and the kindly interest taken in the Society. Having bade adieu to Mr

Maxwell and family, the party returned to Dalbeattie in conveyances, which had been ordered to meet them, and arrived in Dumfries shortly after eight o'clock.

The following is a list of some of the rarer plants met with during the day:—*Helianthemum vulgare, Drosera rotundifolia, Arenaria serpyllifolia, Hypericum quadrangulum, H. humifusum, Orobus tuberosus, Genista tinctora, Peplis portula, Parnassia palustris, Carum verticillatum, Helosciadium inundatum, Galium palustre, Gnaphalium dioicum, G. sylvaticum, Senecio sylvaticus, Crepis paludosa, Campanulia latifolia, Pyrola media, Veronica scutellata, Calamintha Clinopodium, Anagallis tenella, Triglochin palustris, Gymnadenia Conopsea* (pink and white varieties), *Habenaria viridis, H. bifolia, H. chlorantha, Narthecium ossifragum, Carex flava, C. binervis, C. Stellulata, Briza media*, and *Selaginella Selaginoides.*

Brig House Bay and Borgue.—1*st August*, 1885.

The fifth Field Meeting was held on the above date, and, like the preceding ones, the excursion was again favoured with fine weather. Starting from Dumfries by the morning train for Tarff Station, where they were met on arrival by Mr Coles and some Kirkcudbright members; the party proceeded thence in waggonettes through the fertile parishes of Twynholm and Borgue to the Bay, noticing as they passed an old Roman fort on the farm of Boreland of Borgue. This part of the shore was visited on a former occasion by the Society, when the Bone Cave of Borness was then explored. Now the party were contented to botanise along the heights and the cliffs; and the few who had not explored the cave on the former visit, did not feel inclined to undertake the dangerous task of doing so on this occasion. After spending several hours in this way they re-assembled at the farm house of Southpark, where they were entertained to luncheon by Mr and Mrs Coles. Along the sandy margin of the bay were found *Linum perenne, Eryngium maritimum, Erodium cicutarium, Salsola Kali, Salicornia herbacea*, and *Cakile maritima.* Near the Borness Cave the small broad-leaved Centaury, *Erythræa centaurium*, var. *capitata* was found. The rest-harrow, *Ononis arvensis* (red and

white flowered), flourished in the bay ; and in the adjoining bay (Falbogue Bay) *Ononis spinosa* was found in abundance. *Orchis pyramidalis* was now first recorded from this locality. In addition to the above, the following plants were found :—*Arenaria serpyllifolia, Thalictrum majus, Aster tripolium, Anagallis arvensis, A. tenella, Atriplex Babingtonii, Anchusa arvensis, Malva moschata, Helosciadium nodiflorum, Astragalus hypoglottis, Hypericum hirsutum, H. dubium, Serratula tinctoria, Geranium sanguineum, G. pratense,* and *Thalictrum majus,* var. *flexuosum.*

Burnswark Camp.—*5th September*, 1885.

The last Field Meeting was held in the Annandale District, when it was arranged to visit an outcrop of the Silurian rock in the grounds at Castlemilk, proceed thence to Burnswark Camp, and, if time would permit, visit Birrens Camp. A party of thirty left Dumfries by the 11.5 A.M. train for Lockerbie, and on their arrival, they were met by Mr G. Johnstone, who was to conduct the party. Having taken their seats in two waggonettes, they drove through Lockerbie, passed the pretty village of St. Mungo, and halted for a short time on the bridge over the Milk to obtain a view of that picturesque spot. Continuing the drive until Castlemilk was reached, the party alighted there, and inspected the gardens and the site of the old Castle. Under Mr Johnstone's guidance they walked along the bank of the Milk for about half-a-mile, until they arrived at the outcrop, or where the Old Red sandstone and the Silurian formations meet at the surface. The President, Dr Gilchrist, having described the different formations, they returned to the machines, and proceeded on their way to the Camp, halting, however, at Cowdens Old Quarry to enable the geologists to obtain specimens of the Old Red of that district. Burnswark Camp was reached about two o'clock, and here two hours were spent in examining the different encampments and enjoying the delightful view of the surrounding country.

An adjournment was subsequently made to an old quarry on the southern side, where a short business meeting was held. The Secretary read a short description of the Camp, which had been furnished by Mr J. Lennox. According to Mr Lennox's

notes, the summit of the Camp is 900 feet above sea-level, and appears at a distance, or when seen from below, to be a flat expanse, but in reality it is composed of three different crests running from N.E. to S.W. British camps were undoubtedly there, and the remains of one, measuring 150 feet by 100, may still be traced. The Great Camp, which is on the south eastern slope of Burnswark Hill, measures 750 feet in length and 375 in width, while Gordon mentions that it is 834 feet by 492 feet. It is surrounded by a single ditch and parapet, except at the northern angle. Five gateways are still apparent, and Mr Lennox thinks that a sixth existed. On the north eastern rampart, 160 feet from the north corner, was the *Porta Praetoria*, 45 feet in width. Opposite to this entrance was the *Porta Decumara*, on the south-western aspect of the Camp, and of the same size. In the north-west line of the rampart there were three gateways, equi-distant from each other; the outer ones measured 40 feet, and the central one 60 feet in width, and each was guarded by a tumulus about 40 feet distant. The Roman Camp on the N.W. slope of the hill is not so well preserved, and according to Mr Lennox "it is rectangular in shape, and measures 792 feet from north-east to south-west, and 268 feet from south-east to north-west. The south-eastern parapet faces the ascent of the hill. It is not a straight line, dipping as it does somewhat inwards so as to form a wide angle a third of the way from the south corner. At this inflection there is a gate 30 feet in width, protected by an oval-shaped tumulus and ditch. The north-east rampart consists of stone and earth, and is broken 113 feet from the north corner by a doorway 30 feet wide. Gordon estimates that this Camp would hold 2700 foot or 1000 horse. . . It is not impossible that the north-west Camp at least, if not both encampments, were first formed by those who took part in Agricola's second summer expedition, and that subsequently they were occupied and altered by the troops fighting in the time of Hadrian. The position was, in short, not a temporary one, but was frequently employed as a basis of operations."

Mr Johnstone pointed out at the principal Camp an excellent spring, which would be sufficient to supply the wants of the Roman soldiers. He stated that shortly after that property had been acquired by Mr Jardine, M.P., a quern was found in the Camp. It was carried to Castlemilk, where it now lies, and is a very perfect specimen of the kind. The President

described the nature of the trap rock, and referred to the other formations of which this unique hill is composed.

As rain now began to fall, the party returned to the machines, and the concensus of opinion having been taken, it was agreed to return to Lockerbie, and leave for Dumfries by an earlier train, abandoning the intention of visiting Birrens Camp on this occasion.

Owing to the excursion having been arranged more for the antiquarians and geologists than the botanists, very few plants were collected. The Tway-blade, *Listera ovata* was very abundant in the wood at Cowdens Quarry, and the following plants were obtained at the pond near Burnswark:—*Ranunculus Flammula*, *R. trichophyllus*, *Cardamine pretensis* (late in flower), *Hypericum dubium*, *Epilobium palustre*, *Galium palustre*, *Scabiosa succisa*, *Veronica scutellata*, *Myosotis collina*, *Potamogeton natans*, and *P. pusillus*.

Field Meetings, 1886.

Kirkconnell Woods and Newabbey.—1*st May*, 1886.

The first Field Meeting of this session was held on the above date, when a party numbering 18 met at the Fountain at noon, and proceeded thence in waggonettes to Kirkconnell, permission having been granted by R. M. Witham, Esq., to botanize in the woods adjacent to the shore, and to examine the old granite quarry on his estate. On arriving at Whinnyhill, they were joined by Mr Symington, who had promised to act as guide for the day. At Kirkconnell, Mr Witham's gamekeeper met and conducted them through the Old Tower, some rooms of the old house—which is one of the oldest inhabited houses in Scotland—and showed several old swords and portions of armour that had been found in the Kirkconnell Moss. Having examined these interesting objects, the party wandered leisurely through the woods and along the shore until the old quarry was reached, where a halt was made and a short business meeting held—Mr Neilson presiding. The Secretary reported that the Committee had arranged to hold the June excursion in the neighbourhood of Lochmaben, and to meet the Scottish Natural History Club there. He also informed the meeting that a set of Pont's Maps of Dumfriesshire and Galloway had been offered to the Society, and that the Committee were negotiating as to purchasing the same for £5, subject to the approval of this meeting. It was agreed to purchase the maps at the above-named sum. The Secretary subsequently exhibited and described the plants which he collected, but as the season was later than last year only the ordinary spring flowers had been found, the rarest being *Vinca minor* and *Chrysosplenium alternifolium*. Having spent an hour in the quarry, they continued their walk along the shore and adjoining fields until the Abbot's Tower, on the farm of Landis, was reached. This is a square stone tower, now roofless, with its walls covered with ivy; and no one present was able to impart any information respecting it, except what is expressed in the name. After visiting Sweetheart Abbey, the party adjourned to the Commercial Hotel, where tea was partaken of, and at six P.M.

they resumed their seats in the waggonettes for the homeward journey by way of St. Quern's Well, Cargen, reaching Dumfries shortly before eight o'clock.

LOCHMABEN AND BRUCE'S CASTLE.—*5th June*, 1886.

The second Field Meeting was held on the 5th June, when, according to arrangements, it was made a joint excursion with the Scottish Natural History Club, Edinburgh. About forty Dumfries members left by the 11.15 train for Lochmaben, and on arrival they were joined by others from that district. As the Edinburgh Club was not expected until 1.30, the party decided to visit Wood Castle, an old Roman camp about a mile distant, and the botanists could have an opportunity of exploring the adjoining marsh, and the two small lochs near the station. Having met the Edinburgh Club, and being re-inforced by fifteen other members who came by a later train, the party proceeded to the Town Hall, where several interesting antiquities were exhibited by Mr Rae, S.S.C., including the town's records, and some old instruments of torture. From here they went to the schoolhouse, where Mr Clark showed some fine geological specimens, a spear head, and several relics of the lake dwelling which he had "fished up" in the Castle Loch. Arriving at the Castle Loch, the majority crossed it in five boats, while the timorous members preferred walking around it to Bruce's Castle. Having assembled in the centre of that old and noble ruin, a short business meeting was held, when Dr Grierson presided, and welcomed the members of the Edinburgh Club to this district. Mr Craig Christie, F.L.S., secretary of the Edinburgh Club, read letters of apology for absence from the President and Vice-President of that Society, and expressed the pleasure on behalf of the members present, which they had in visiting that interesting and historical district. The local secretary read a letter from the Rev. W. Graham, expressing regret at not being able through indisposition to conduct the party as he had kindly promised to do. Mr Graham, however, contributed important details respecting the excursion, and with the assistance of Messrs Rae and Clarke, it was in every respect successful.

Having spent two hours in examining the ruins, botanizing on the island, and dragging the loch for water plants, they again

re-crossed the loch to the landing stage, and subsequently visited the two old bells in the parish church. [For a detailed description of Bruce's Castle see Transactions, Session 1883-84.]

In reference to these bells, Mr J. Barbour, Vice-President, supplies the following note :—

There are two bells in the tower of the church, only one of which is inscribed. This one measures 21 inches in height, and 12 inches diameter at the shoulder, and 19 inches at the mouth. Immediately under the shoulder two raised lines, $\frac{5}{8}$ inch apart, pass round the bell, forming the upper margin of the inscription space, which is $1\frac{1}{2}$ inch in breadth ; and the lower margin is formed of two similar lines. The lip-moulding is a semi-torus with a fillet over it, between which and the lower margin of the inscription belt the body of the bell forms a hollow curve, increasing in flatness as it rises. The bell is not otherwise ornamented except by the inscriptions ; it has a plain appearance, and cannot be said to be of elegant form or fine workmanship. In these respects it is much inferior to the Holywood bell and the Carlyle bell in the Observatory Museum. There are two inscriptions. The upper one, with two crosses, which may be taken one as the beginning and the other as the end, extends quite round the bell in the space between the margin lines before mentioned ; and the lower one, which is immediately over the lip-moulding, is arranged—two letters on the north side of the bell, two on the south, two on the east, and two on the west sides. The letters are of a character usually called Saxon ; they are raised, and every letter is upon a separate small square slightly projecting beyond the surface of the bell. The letters are delicate and ornamental, the crosses particularly so, and the inscriptions appear more artistic than the bell itself. The inscriptions run thus (only not, as here, in Roman characters) :—+ TICEFEMMADASENNAHOI + ; and, on one side, AI, another RA, the third ME, and the fourth VA. One peculiarity of the upper inscription is that there is no separation of the several words of which it is composed, and there is a second, which applies to both inscriptions—they read backwards from right to left, and the letters themselves are reversed. The upper inscription, reversed and separated into words, reads—+ IOHANNES ADAM ME FECIT + ; and the lower, when reversed and arranged, AVE MARIA. I understand this bell is referred to in the Antiquarian Society of Scotland's publication. No doubt the bell is an ancient one. The companion bell, which is uninscribed, has not received sufficient notice. A careful comparison will, I think, show that the two bells are by the same maker and of the same age. The uninscribed bell measures 18 inches in height, and 12 inches diameter at the shoulder, and $21\frac{3}{4}$ inches at the mouth. Two lines run round the shoulder, of less breadth than on the other bell. The fillet of the lip-moulding differs slightly from that of the inscribed bell, and the hollow of the body is much greater in this case, owing to the greater diameter at the mouth. From the shoulder upwards the two bells are exactly alike, the form being an ogee terminating in a flat top, from which the loops spring for securing the bell to the axle. The provision for hanging consists of a centre pillar, oblong on plan, with a semi-pyramid projecting on each side and resting on the

level top of the bell, and six loops showing a twisted rope-like surface, two on each side, one in front, and one at back, springing from the level top of the bell and curving over to the centre, and together producing the form of a crown. These attachments are identically alike on the one bell and the other. The difference of the two bells as to dimensions and form would be required in order to produce the desired variation of tone; and their minute points of resemblance prove, I think, that they are the work of the same maker. Both, I understand, hung in the old pre-reformation church of Lochmaben, St. Magdalene's, which was burned in a Border fray between the Johnstones and Maxwells.

Leaving the Church, the party ascended the Castle hill, and examined the site of the old castle, not a trace of which could now be seen. Here they arranged themselves in a group, and were photographed by a member of the Edinburgh Society, prior to their departure by the six o'clock trains for their respective destinations.

The following plants were found during the day, some of which were not yet in flower :—*Arabis thaliana*, *Barbarea vulgaris*, *Draba verna*, *Peplis portula*, *Galium cruciatum*, *Sherardia arvensis*, *Menyanthes trifoliata*, *Orobanche major*, *Lycopus europæus*, *Myosotis, versicolor*, *Polygonum amphibium*, *Callitriche verna*, *C. hamulata*, *Myrica Gale*, *Salex pentandra*, *S. viminalis*, *S repens*, and *Alisma plantago*. *Botrychium Lunaria* was abundant on the site of the old castle.

In reference to the entomological finds, Mr W. Lennon states that he found *Cicindelidæ*, the *Dytiscidæ*, and *Staphylinidæ* all very scarce By sweeping along the sloping banks of the railway, and round the margins of the Castle Loch, the following species may be noted :—*Anchomenus marginatus*, *Amara consularis*, *A. Spinipes* and *A. acuminata*, *Harpalus ruficornis*, *Bembidium rufescens*, *Haliplus flavicollis*, *Necrophorus ruspator*, *Silpha thoracica*, *Byturus sambuci*, *Coccinella hieroglyphica*, *Chilocorus bipustulatus*, *Exochomus nigromaculatus*, *Cryptohypnus dermestoides*, *Corymbites metallicus*, *Telephorus rusticus*, *T. nigricans*, *T. limbatus*, *T. pallidus*, *Phyllobius viridicollis*, *Erirhinus nereis*, *Baris t-album*, *Apion cerdo* (rather rare), *Phlœophthorus rhododactylus* (not common), *Donacia simplex*, *Galeruca sagittariæ*, *Hyperaspis reppensis* (not common), *Cassida flaveola*.

Morton Castle, Gatelaw Bridge, and Crichope Linn. *3d July*, 1886.

The third Field Meeting was held in the Thornhill District on the above date, when a party numbering thirty-six left Dumfries station by the morning train. On arriving at Thornhill they were joined by Dr Grierson and eight other members, and proceeded immediately in waggonettes to Morton Castle. From the Castle they walked to the ruins of Morton old church, and this interesting building was described by Rev. Mr Oswald, who also gave a short account of its history.

Resuming their seats in the conveyances they proceeded to Crichope Linn, without calling at Gatelaw Bridge Quarries. Several hours were here spent in rambling through the woods and enjoying the scenery of that romantic glen, but very few botanical "finds" were made. The party returned to Dumfries by the 7.30 p.m. train from Closeburn. In the unavoidable absence of the Secretary, Mr T. Brown conducted the party.

Kirkconnell Lea and Birrens Camp.—*7th August*, 1886.

The fourth Field Meeting was held in the Annandale district, when a party numbering 22 left Dumfries by 9.15 A.M. train for Lockerbie. On arrival, they were joined by two other members, and proceeded in conveyances to Ecclefechan, where a halt was made for a short time to permit those who had not seen Carlyle's house to visit it. After duly examining all that could be seen, the drive was continued to Kirtlebridge, and from there the party proceeded on foot up the beautiful and romantic glen through which the Kirtle Water flows, as far as "Fair Ellen's Bower." An obliging forester conducted the party thence to the spot at which "Fair Ellen of Kirkconnell Lea" was shot, and also to her grave. Having botanized for a couple of hours in the glen, the old Churchyard of Kirkconnell was next visited, where there are several old and curious tombstones. Returning to Kirtlebridge, the drive was continued to Merkland Cross, which stands near the roadside, not far from the village of that name. This cross is octagonal at the base, tapering to the top, and measures 9 feet high. It is supposed to have been erected in

1483 to the memory of Maxwell, the Warden of the Marches, who, after a victorious skirmish with the Duke of Albany, was assassinated on that spot. Time did not permit the party proceeding to Woodhouse Tower, but Birrens Camp was visited on the return journey.

At "Fair Ellen's Bower" a short business meeting was held—Mr Neilson presiding—when Mr A. Hair, Durisdeer; Mr A. Jardine, Thornhill; Mr Graham, Ecclefechan; and Miss Morgan, Dumfries, were admitted new members. Letters of apology for absence from the President and Secretary were read by Mr Davidson, who, in the absence of the latter, conducted the party.

Mr J. Shaw supplies the following note respecting the botanical finds:—Plants found in the woods round "Fair Ellen's Bower:" —*Paris quadrifolia* (luxuriant, some with five leaves), *Lysimachia nemorum*, *Sanicla europæus*, *Hieracium sylvaticum*, *Hieracium murorum*, *Hieracium boreale*, *Apargia hispida*, *Aparga autumnalis*, *Hypochœris radicata*, *Crepis virens*, *Crepis paludosa*, and *Circea lutetiana*. In the old Kirkconnell Churchyard a small tree of *Berberis vulgaris* was gay with drooping berries. The Churchyard at Ecclefechan was bright with *Galium verum* and *Campanula rotundifolia*. Around a pond at the entrance to Springkell were beautiful specimens of *Lythrum Salicaria*. On Birrens Camp *Hieracium Pilosella* was still in bloom, while our thistles and bedstraws were well represented.

Annan and Brydekirk.—*4th September*, 1886.

The last Field Meeting of the Session, like the preceding ones, was held under very favourable circumstances on the above date. Owing to many members being away for holidays, only sixteen left Dumfries at the hour appointed (11.45), and on their arrival at Annan they were joined by Mr F. Miller, who had kindly consented to act as guide, and Mr D. Watt. After examining a collection of old coins in the possession of Mr Moffat, the party proceeded to the Town Hall, where a number of interesting objects were inspected. The old churchyard adjoining was next visited, and here half-an-hour was spent in deciphering the inscriptions on old tombstones. The old castle of Annan

formerly stood on the site now occupied by the Town Hall and the churchyard, but of this building not a trace could be distinguished. There is, however, a large stone built into the boundary wall of one of the adjacent gardens, bearing the following inscription:—"Robert De Brus, Counte De Carrick, et Seniour De Val De Annand 1300." This old castle was the scene of many border frays, and on more than one occasion it was plundered. In 1332, shortly after Edward Baliol was crowned at Scone, the nobility of the South of Scotland were summoned to Annan Castle to do him homage. On this occasion the castle was attacked in the night by Archibald Douglas, who killed the guards, and took Baliol's brother Henry with many of his supporters prisoners. In the confusion Baliol escaped to Carlisle, and found a temporary refuge there with Lord Dacre.

Leaving this part of the town, the party adjourned to Mr Watt's residence, where they were entertained to luncheon, and had an opportunity of examining some interesting objects.

The house in which Edward Irving was born was next visited, and also that of Hugh Clapperton, the African traveller.

From here the party drove to Brydekirk to inspect an old fort which is situated on the farm of Brydekirk Mains, halting on the way to examine the Corsehill quarries. At Brydekirk the usual business meeting was held—Dr Grierson presiding—when Messrs J. M'C. Arnott and F. Miller were elected members. The Chairman intimated that the Committee had decided to hold a conversazione in the end of October, and suggested that the members in the meantime should look out local objects of interest only for exhibition.

After awarding votes of thanks to Messrs Miller and Watt, the party walked along the banks of the river to the town, and returned to Dumfries by the 8 o'clock train.

Only the usual autumn flowering plants were collected, no rare finds having been made.

APPENDIX.

REPORT OF SUB-COMMITTEE ON THE ACQUISITION OF THE NEW ROOMS,

Read 8th January, 1886.

At a special meeting of the Society, held on the 22d May, 1885, it was unanimously agreed to proceed with the scheme for acquiring the occupancy of the Presbytery House on lease for a term of years. A sub-committee, consisting of Dr Gilchrist, and Messrs Starke, Barbour, Lennox, Watson, and Wilson, was then appointed with full power on behalf of the Society, to make and complete the necessary arrangements, provided they should first obtain the promise of £60 towards the expense to be incurred before commencing operations.

Since that date your sub-committee have met frequently, and, as arrangements had to be made between the Synod, Presbytery, Kirk-Session, and Town Council of Dumfries, their completion has been naturally tedious.

We now beg to report that we have entered into an agreement with all the parties interested in the Presbytery House, and that the document has been duly signed by Mr Starke on behalf of this Society, and by representatives of the different bodies already-mentioned.

To give the minute of agreement here would occupy too much space, but it is copied in full in the minute book, and the following points form a résumé of it:—It is agreed that this Society have the free use and occupancy of the Presbytery House for fifteen years from Whitsunday, 1885, at the nominal rent of two shillings and sixpence per annum. The Synod, Presbytery, and Kirk-Session have the right to the use of the building for their meetings as heretofore; and neither of the parties to the agreement has the privilege of sub-letting the building. The repairs and furnishings have been made at this Society's expense. The Presbytery has the power of terminating the lease on giving notice in writing, provided that the Presbytery pays to the Society a sum equivalent to all the expenses incurred by the Society on the building and during the term of occupancy, less five per cent. per annum for depreciation. In the event of the Society vacating the building, one table and forty-two chairs are to be left, and these then become the Presbytery's property.

When the sub-committee was appointed their first object was to ascertain the probable cost of repairing the building, and subsequently to be guided in the furnishings as funds permitted. Mr Barbour gave a detailed estimate of the repairs needed, showing that £60 were at least required for the fabric, and the furnishings would have to be provided extra. This seemed like throwing cold water on the scheme, but it was soon dispelled by the enthusiasm of the oldest and most energetic members of the Society, including our late President — Dr Gilchrist — whose death we now so deeply mourn.

As instructed, a circular was issued to ladies and gentlemen interested in the Society's doings, and this met with a liberal response from some; but, as you are aware, the greater portion was obtained by the Sub-committee waiting upon members or their friends. It is very gratifying to state that the total sum thus raised, including the Presbytery's donation, amounts to £103 3s 9d.

[Instead of giving here the list of the names of subscribers submitted to the meeting, we purpose giving only the amount subscribed and expenditure incurred to 5th November, 1886, when the accounts were closed.]

RECEIPTS.

Donation from Presbytery of Dumfries	£20	0	0
Presbytery of Dumfries, half cost of Legal Expenses	1	9	9
Subscriptions from Members and Friends of the Society	84	7	0
Surplus from Summer Excursions—Years 1885 and 1886	0	11	6
Cash from Ordinary Account	7	1	1
Total	£113	9	4

EXPENDITURE.

Mr Crackstone for Building, per Estimate... ...	£59	0	0
,, Painters' and Glaziers' Work ...	8	15	8
,, Gasfittings	7	3	9
,, Large Table and Case	14	10	0
,, Small Table and Stand	1	19	0
,, Grates and other Fixtures, &c. ...	6	3	1
Messrs Burgess & Stobie for Chairs...	10	11	6
Messrs Stark & Thomson, Legal Expenses ...	2	19	6
Mr Thompson, Fireguards	0	6	0
Mr M'Lean, (Subscription exchanged for Clock) ...	0	10	0
J. Brown, extra attendance, &c.	0	10	0
Printing of Circulars	0	9	6
Secretary's Outlay (Postage and Coals)	0	11	4
Total	£113	9	4

"*5th November, 1886.*—Audited and found correct.—(Signed) M. M'INNES."

At a meeting of the committee, held on the 30th October, 1885, the sub-committee were empowered to draw on the ordinary account to the amount of £15, but of this sum only £7 1s 1d is needed to discharge all accounts, and by taking that sum your sub-committee have discharged the duty with which they were entrusted, and that too in the best interests of the Society.

In conclusion, we wish to mention Mr Barbour's gratuitous official services in superintending the operations, and to express our thanks to the 125 subscribers for the handsome way they have responded to our call.

J. GIBSON H. STARKE, *V.P.*
JAMES BARBOUR, *V.P.*
JAMES LENNOX, *Treasurer.*
T. WATSON.
J. WILSON, *Hon. Secy.*